



## Current Trends in Drug Use Among Youth

Jeff R. Temple, PhD  
 Professor and Director  
 Center for Violence Prevention  
 UTMB Health  
 @DrJeffTemple

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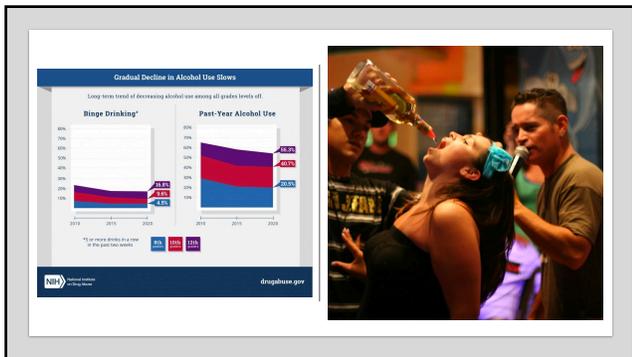
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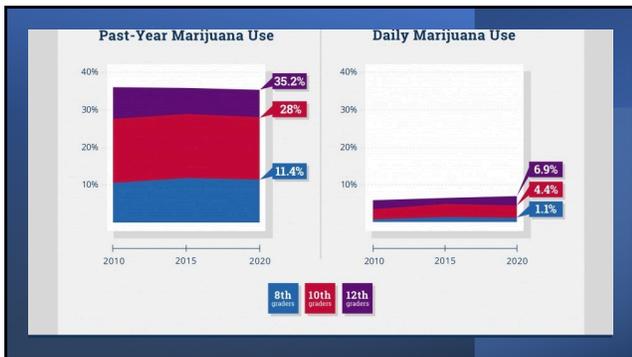
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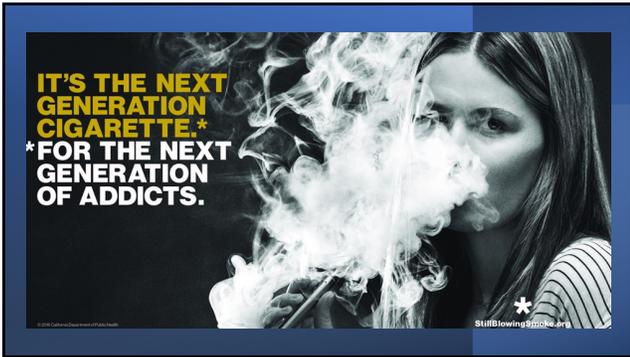
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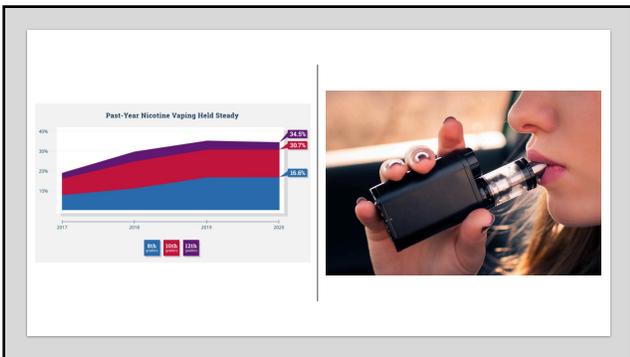
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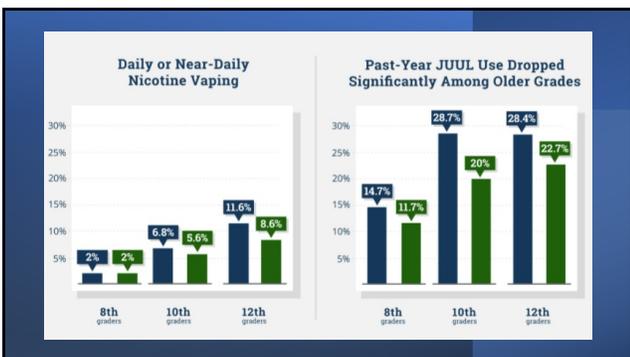
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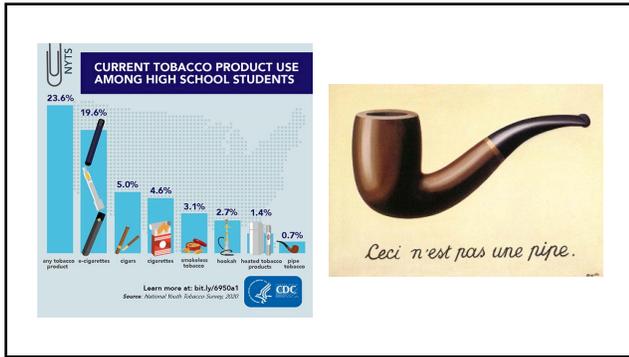
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**E-cigarette Use of Young Adults: Motivations and Associations with Combustible Cigarette, Alcohol, Marijuana, and Other Illicit Drugs**

Jeff B. Tate, PhD<sup>1</sup>, Ryan C. Sherry, PhD<sup>2</sup>, Yu Lu, PhD<sup>3</sup>, Elizabeth Torres, MPH<sup>1</sup>, Gregory L. Stuart, PhD<sup>1</sup>, and W. D. Li, MPH<sup>1</sup>  
<sup>1</sup>Department of Psychiatry, University of Texas Medical Branch, Galveston, TX  
<sup>2</sup>Department of Psychology, Ohio University, Athens, OH  
<sup>3</sup>Department of Psychology, University of Tennessee, Knoxville, TN

**Abstract**  
**Background and Objectives**—Although the prevalence of e-cigarettes use among adolescents and young adults has caught up to or eclipsed that of combustible cigarette use, there is relatively little known about the link between e-cigarettes and other substances and (b) the reasons underlying this increase in e-cigarette use. To address this gap in knowledge, the current study examined associations between e-cigarette use and other substances and identified motives for e-cigarette use among young adults.  
**Methods**—Participants included an ethnically diverse sample of African American, White, and Hispanic young adults (N=627; 67% female) who were participating in an ongoing survey-based longitudinal study of health and risky behaviors.  
**Results**—Hispanic, White, and male young adults reported significantly greater past year e-cigarette use compared to their African American and female counterparts. Bivariate correlations showed that use of e-cigarettes was positively associated with use of combustible cigarettes, alcohol, marijuana, cocaine, amphetamines, inhalants, hallucinogens, ecstasy, and misuse of over-the-counter and prescription medications. Furthermore, e-cigarette users reported a higher prevalence of substance use relative to those who did not use e-cigarettes. The taste of e-cigarettes was identified as an important motive for use.  
**Conclusions and Significance**—Although the potential harm associated with e-cigarettes remains largely unknown, e-cigarettes appear to be a risk marker for the use of substances that are known to pose substantial health problems. Health care providers should screen for e-cigarette use, and youth substance use prevention programs should target the reduction of e-cigarette use with particular attention to addressing their taste appeal.

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Primary reason for use	Percent
Taste better than regular cigarettes	55.7%
Using as a substitute for smoking in places where smoking is prohibited	36.2%
To avoid smelling like tobacco smoke	31.9%
To help cut down the number of cigarettes smoked	23.8%
To help quit smoking entirely	23.8%
To save money	18.9%
To avoid exposing other to second-hand smoke	17.3%

**FINDINGS**

Findings suggest that e-cigarette use is common, especially among males, and Hispanic and Caucasian young adults.

E-cigarette use was significantly and positively correlated with every substance use variable (alcohol, cigarettes, marijuana, cocaine, amphetamines, inhalants, hallucinogens, over the counter medicines, ecstasy, prescription medicines, and all other illicit drugs).

The primary motivation for e-cigarette use was “the taste is better than regular cigarettes” which may be associated with youth and young adult initiation. This is concerning because e-cigarette use may transition to traditional cigarette use which have known harmful effects.

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# FLAVORED E-JUICE

Why do we care?

- 55.7% of adolescents primary use for e-cigs due to **flavor**
- Majority of flavors reported by participants were fruit flavored
- Ads promoting various flavors are targeted to youth

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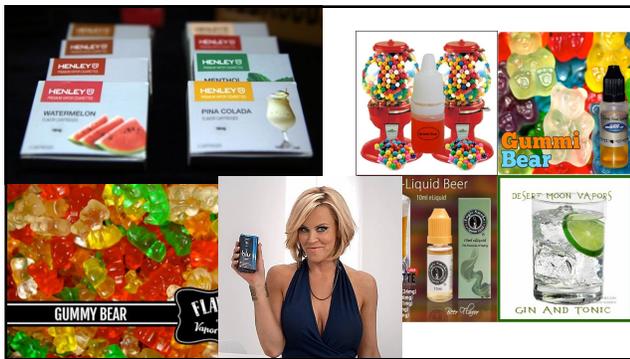
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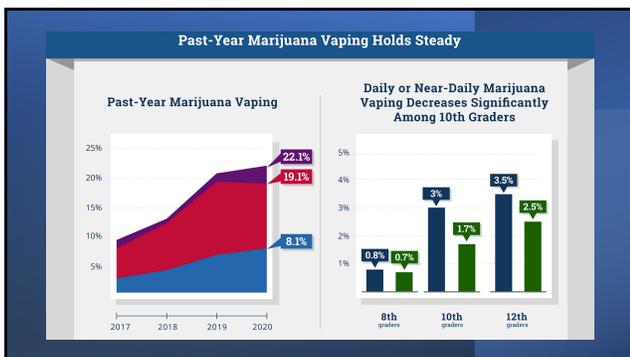
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### Spice (Synthetic Marijuana)

- Also known as → K2, fake weed, black mamba, skunk
  - Mix of herbs and manmade chemical w/ mind altering effects
  - How it's used: smoked → rolled in papers (like marijuana or homemade tobacco cigarettes), mixed w/ marijuana, liquid form can be vaporized in e-cigarettes
  - Often labeled "not for human consumption" and disguised as



Monitoring the Future Study: Trends in Prevalence of Spice in 2015 (%)

8 <sup>th</sup> graders	3.10
10 <sup>th</sup> graders	4.30
12 <sup>th</sup> graders	5.20

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### Longitudinal Predictors of Synthetic Cannabinoid Use in Adolescents

Andrew L. Mennicken, BA<sup>1</sup> / Yujia Jiang, PhD<sup>2</sup> / Gregory J. Stuart, PhD<sup>2</sup> / Jeff R. Temple, PhD<sup>2</sup>

TABLE 1 Key Variables

Variables	Values
First year substance use, n (%)	
SCA, baseline (n = 950)	
No	831 (87.28)
Yes	124 (12.98)
SCA, follow-up (n = 880)	
No	770 (87.28)
Yes	110 (12.51)
Marijuana, baseline (n = 950)	
No	854 (89.89)
Yes	294 (30.89)
Marijuana, follow-up (n = 880)	
No	548 (62.27)
Yes	332 (37.73)

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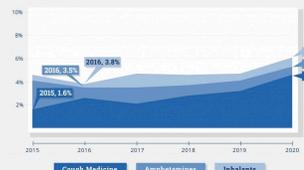
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### Amphetamine, Inhalant & Cough Medicine Misuse Trending Upward Among Eighth Graders

Past-Year Substance Misuse Among Eighth Graders



drugabuse.gov

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**The Spectrum of Prescription Drug Abuse**

- Taking someone else's prescription to self-medicate
- Taking a prescription medication in a way other than prescribed
- Taking a medication to get high

From Improper Use to Abuse

**Drug Epidemic**

- Approximately **1,600 TEENS** begin abusing prescription drugs each day
- 1 IN 5 TEENS** (20%) abuse prescription drugs at least once in their lifetime
- 50%** of teens abuse prescription drugs at least once (legal street drugs)
- From ages 12 to 17, **2,500 YOUTH** abuse a prescription pain reliever
- 65%** of teens say that their medicine cabinet has at least one type of drug
- 2 IN 3 TEENS** (66%) who abuse prescription drugs also abuse other and illegal drugs of abuse
- Teens abuse prescription drugs more than: ECSTASY, HEROIN, CRACK/COCAINE & METHAMPHETAMINE COMBINED

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**DELTA-8 THC HAS SERIOUS HEALTH RISKS**

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**HOOKAHS**

- Also known as → water pipes, shisha, hubbly-bubbly
- According to the National Youth Tobacco Survey (2011-2015), current use of hookahs increased among middle and high school students.
  - Past 30 day use of hookah
    - 2 of every 100 **middle school students** (2.0%) reported in 2015 - increased from 1.0% in 2011.
    - About 7 of every 100 **high school students** (7.2%) reported in 2015 increased from 4.1% in 2011.

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Identification of Risk Factors for Drug Abuse

Adolescents are more likely to use drugs if:

- There is a history of substance abuse in their family
- They are depressed or impulsive
- Have experienced a trauma
- Have low self-efficacy
- Do poorly in school
- Associate with alcohol/drug using peers/partners

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Effects of Substance Abuse on Adolescent Development

Negative effects on adolescents' brain development

- Consumed early in adolescence, alcohol can disrupt endocrine development
- Marijuana is known to adversely affect learning and memory performance of adolescents

Adolescents engage in sexual activities more frequently

- And, more importantly, less likely to practice safe sex.
- Teens who use substances are substantially more likely to have been pregnant or to have gotten pregnant

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Effects of Substance Abuse on Adolescent Development

Accident Risk Increase

- Substance abuse coupled with inexperienced driving

Risk of Addiction

- Substantially increased risk of becoming addicted if start as an adolescent

Arrested Development

- When teens start using drugs or drinking alcohol during the developmental years, their social and emotional development is halted

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Long-term Effects of Marijuana Use on Development Of Youth

Prolonged drug use changes the brain in fundamental and long-lasting ways:

For example, long-term effects of marijuana use among youth

- Ability to do complex tasks could be compromised (e.g., poor coordination, lowered concentration)
- People who use marijuana over the long term report less life satisfaction, poorer education & job achievement, and more interpersonal problems
- Approximately, 9 percent of people who use marijuana become dependent on it, and the number increases to about one in six among those who start using it at a young age, and to 25 to 50 percent among daily users

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Specific Effects of Alcohol Abuse on Development Of Youth

Alcohol impacts adolescents differently than it does adults

- Recent brain research with MRI suggests that young people are more vulnerable to the negative effects of alcohol on the hippocampus (part of brain that regulates working memory and learning).
- Heavy use of alcohol and other drugs during the teen years can result in lower scores on tests of memory and attention in one's early to mid-20s.
- People who begin drinking before age 15 are four times more likely to become alcohol-dependent than those who have a later drinking debut.
- Teens also tend to be less sensitive to Alcohol's sedative qualities. Teens are able to stay awake longer than adults, which enables them to drink more and be more vulnerable to cognitive impairment, brain damage, and risky behavior.

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Do Adolescents Really React Differently Than Adults To Substances Use?

Age Group	Percentage
Child (12)	1.5%
Teen (12-17)	67%
Young Adult (18-24)	26%
Adult (>25)	5.6%

Exposure Type	Number of Inhalations
Adolescent Exposure	10
Adult Exposure	4

Exposure Type	mg/kg
Adolescent Exposure	0.3
Adult Exposure	0.1

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Why Is It Important To Screen For Adolescent Alcohol And Substance Abuse?

Associated with **three major causes of youth mortality**: accidents (primarily motor vehicle accidents), homicide, and suicide. Among youth, **more than 30 percent of all deaths from injuries can be directly linked to alcohol.**

In addition, cocaine use can produce acute cardiovascular and other complications (e.g., arrhythmias, myocardial infarction, seizures).

Indirect legal, social, and economic consequences of drug use need to be noted. (e.g., cost of crime and incarceration, reduced productivity, etc.)

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Screening for Adolescents Drug Use: Introducing CRAFFT

Health service providers, juvenile justice workers, educators, and other professionals who work with adolescents at risk should be able to screen and refer to further assessment

The CRAFFT is a behavioral health screening tool for use with children under the age of 21. Recommended by AAP for use with adolescents

CRAFFT consists of a series of 6 questions developed to screen adolescents for high risk alcohol and other drug use disorders simultaneously. It is a short and effective screening tool meant to assess whether a longer conversation about the content of use, frequency, and other risks and consequences of alcohol and other drug use is warranted.

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CRAFFT: Example of Screening Questions

**The CRAFFT Screening Questions - Appendix A**  
Please answer all questions honestly; your answers will be kept confidential.

**Part A**  
During the PAST 12 MONTHS, did you:

1. Drink any alcohol (more than a few sips)?  No  Yes

2. Drive a car or any motorcycle or boat?  No  Yes

3. Forget to get high?  No  Yes

\*Substance(s) includes illegal drugs, over the counter and prescription drugs, and drugs that you snort or "hurt"

**Part B**

1. Have you ever ridden in a CAR driven by someone (including yourself) who was "High" or had been using alcohol or drugs?  No  Yes

2. Do you ever use alcohol or drugs to RELAX, feel better about yourself, or fit in?  No  Yes

3. Do you ever use alcohol or drugs while you are by yourself, or ALONE?  No  Yes

4. Do you ever FORGET things you did while using alcohol or drugs?  No  Yes

5. Do your FAMILY or FRIENDS ever tell you that you should cut down on your drinking or drug use?  No  Yes

6. Have you ever gotten into TROUBLE while you were using alcohol or drugs?  No  Yes

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**Timely Management: Referral or Intervention**

Adolescents who screen as high risk(e.g., CRAFFT score of 2 or more) should have further assessment to determine whether they have developed dependence (addiction) to alcohol or another drug

Adolescents who are high-risk users but have not developed an addiction may benefit from a brief intervention – 1 or 2 brief intervention sessions either conducted by a primary care provider or allied mental health professional to discuss the impact of drugs or alcohol on their lives or their futures

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**Prevention of Alcohol/Substance Abuse**

motivational interviewing (or change talk) skill is valuable for healthcare providers

- change talk is meant to be self-motivating dialogue
- change is facilitated by communicating in a way that elicits the person's own reasons for and advantages of change
- can be helpful in assisting patient to resolve his/her ambivalence towards the impact of using alcohol and other drugs



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**Preventing Drug Use Among Youth**

For families: **Evidence-based family skills training programs** (e.g., Strategic Prevention Framework offered by the Substance Abuse and Mental Health Service Administration) have been found to be the most effective way to prevent substance use among children and adolescents

Programs target the whole family and offer skills-building for parents on monitoring and supervision of children's activities, communication and setting age appropriate limits.

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# Preventing Drug Use Among Youth

## For Schools/Communities:

✓ Organize a Kick Off Event

To garner community-wide attention, organize a walk or run culminating in a rally featuring presentations from community leaders on the importance of preventing drug use before it begins

✓ Utilize Social Media

Post information about substance abuse and initiate discussions, media feeds, and open forums about prevention on your coalition's Facebook page and Twitter feed

✓ Promote Alternative Activities

Sports, art, and other healthy and fun activities such as a substance-free tailgate before a school football game or a safe homecoming after-party in a community center or gymnasium are great ways to deter youth from substance use and other risky behaviors

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