WELCOME to the

Supporting Our Students

ECHO

Session will start in less than 15 minutes
Substance Use in Adolescents

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Conflict of Interest Disclosure Statement

No Conflicts of Interest
What is addiction? 3 C’s

• Chronic brain disease

• Causes person to use drugs repeatedly (Compulsion)

• Use continues despite the harm they cause (Consequences)

• Person can’t stop even if they want to (Control - loss of)
Addiction: A developmental disease

Blue represents maturing of brain areas.
Teens more vulnerable to addiction
Which substances are the teens using?

Substance use trends in teens

Figure 1. Trends in Alcohol, Cigarette and Marijuana Use: 30-day prevalence in 12th graders

<table>
<thead>
<tr>
<th></th>
<th>2007</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>44%</td>
<td>33%</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>22%</td>
<td>10%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>19%</td>
<td>23%</td>
</tr>
</tbody>
</table>

ILLICIT DRUG USE

ILLICIT DRUG USE STEADY
Past year use among 12th graders

PAST YEAR ILLICIT DRUG USE
Past year use among 12th graders

- Marijuana: 35.7%
- LSD: 3.6%
- Synthetic Cannabinoids: 3.3%
- Cocaine: 2.2%
- MDMA: 2.2%
- Heroin: 0.4%

Any illicit drug: 38.0%
Any illicit drug NOT including marijuana: 11.5%
BINGE DRINKING* RATES CONTINUE DOWNWARD TRENDS

*Binge drinking is defined as having 5 or more drinks in a row in the last 2 weeks.

BINGE DRINKING: SIGNIFICANT DROP IN PAST FIVE YEARS ACROSS ALL GRADES.

NIH National Institute on Drug Abuse
ALCOHOL USE CONTINUES ITS DECLINE

PAST YEAR ALCOHOL USE
Significant long-term decrease in all grades

8th graders: 52.1%
10th graders: 37.7%
12th graders: 19.3%

2009 2014 2019

BINGE DRINKING*
Significant long-term decrease in all grades

*5 or more drinks in a row in the past two weeks

2009 2014 2019

8th graders: 14.4%
10th graders: 8.5%
12th graders: 3.8%

NIH National Institute on Drug Abuse

DRUGABUSE.GOV
Figure 1. Drinking prevalence within last 30 days, by grade

7% 8th Grade
20% 10th Grade
33% 12th Grade

Prevention is the best strategy
DAILY MARIJUANA USE sees significant increase among 8th and 10th graders since 2018

- 2017: 1.3%
- 2018: 4.8%
- 2019: 6.4%

PAST YEAR MARIJUANA USE gap closing between older grades

- 2017: 11.8%
- 2018: 28.8%
- 2019: 35.7%
Marijuana Perceived Risk vs. Past Year Use by 12th Graders

SOURCE: University of Michigan, 2013 Monitoring the Future Study
How do drugs affect the brain?

- Imitate the brain’s natural neurotransmitters
- Over stimulate the reward circuit of the brain
Risks of Substance use

Why encourage abstinence?
ADDICTION STARTS in TEEN YEARS

The Drug Danger Zone: Most Illicit Drug Use Starts in the Teenage Years

Percentage of Past-Year Initiates among Those Who Have Never Used

- 12-13: 2.9%
- 14-15: 8.0%
- 16-17: 11.2%
- 18-20: 10.4%
- 21-25: 4.5%
- 26 or Older: 0.3%

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health, 2011 and 2012.
DRUG USE DISORDER ONSET

Compton et al, Archives of Gen Psych '07; 45 (11): 1294-1303
Ten leading causes of child and adolescent death, 2016

- Motor vehicle crash
- Firearm-related injury
- Malignant neoplasm
- Suffocation
- Drowning
- Drug overdose or poisoning
- Congenital anomalies
- Heart disease
- Fire or burns
- Chronic lower respiratory disease

Rate per 100,000 individuals aged 1-19 years

Note: Based on data from the Centers for Disease Control and Prevention’s Wide-ranging Online Data for Epidemiologic Research system.

Figure 1. Drug overdose death rates for adolescents aged 15–19, by sex: United States, 1999–2015

Deaths per 100,000 population in specified category

1. Male
2. Total
3. Female
Age at First Drink and Risk of Alcohol Disorder

% with Alcohol Disorder

Source: Klingson RW, Heeren T, Winter MR. Age at drinking onset and alcohol dependence.
Age at First Use and Risk of Marijuana Disorder

ADOLESCENT MJ USE & RISK OF PSYCHOSIS

Percentage of Individuals Meeting Diagnostic Criteria for Schizophreniform Disorder at Age 26

- No adolescent cannabis use
- Adolescent cannabis use

Met/Met
Val/Met
Val/Val

Cognitive effects of Cannabis: Dunedin study

Change in IQ From 13 to 38 y.o.

- Mj dependent 3+ yrs
- Mj dependent 2 yrs
- Mj dependent 1 yr
- Used, never diagnosed
- Never used

Source: Maier et al., PNAS, 2017.
Factors Increasing Risk of Addiction

- Home and family
- Peers and School
- Early use
- Method of use
Warning signs of teen drug use

• Mood changes (irritability, low frustration tolerance, depression, anxiety)

• Change in friends

• Loss of interest in favorite activities

• Not caring about appearance

• Academic problems

• Getting in trouble in school or runaway delinquent behavior

• Having problems with family members and friends
Talking to teens about drug use

• Ask about their views
• Discuss reasons not to use
• Discuss how to resist peer pressure
• Know your teens activities and friends
• Establish rules and consequence
• Keep track of prescription drugs
• Provide support and set a good example
Questions to ask

• Answering yes to any of the following questions may indicate a problem: CRAFFT

• Have you ever ridden in a Car (including yourself) with someone who had been using alcohol or drugs?

• Do you ever use alcohol or drugs to Relax, feel better about yourself or fit in?

• Do you ever use drugs or alcohol when you are Alone?

• Do Family members tell you to cut down on your use?

• Have you ever gotten into Trouble while using?
Treatment approaches for addiction

- Medication management
  (withdrawal, relapse prevention, co-occurring conditions)
- Psychotherapy/Counseling
  (Individual, family)
- Mentorship programs
- Engagement in healthy extracurricular activities
Principles of Effective Treatment

- Counseling and behavioral therapies are the most commonly used
- Medication often combined with therapy
- Evaluate for other underlying mental health disorders (depression, anxiety, ADHD, trauma, IQ testing)
- Need not be voluntary
- Drug use during treatment needs to be monitored
- Also evaluate for medical problems arising from risky behaviors (infections, STDs, HIV)
Levels of Care

- Outpatient behavioral treatment:
  - Cognitive Behavior Therapy
  - Family therapy
  - Motivational interviewing
  - Motivational Incentives (contingency management)

- Inpatient or residential treatment

- Juvenile Justice
COVID-19 is an emerging, rapidly evolving situation.

Get the latest information from CDC (Coronavirus.gov) | NIH Resources | NIDA Resources

Teachers: Classroom Resources on Drug Effects

Lesson Plan and Activity Finder
Free lessons and other classroom activities based on national standards.

Scholastic Heads Up
Lessons and activities on drugs, drug use, and life skills from Scholastic.

Drug Facts for Students
Facts on the health effects and consequences of drug use for students.