



BEST PRACTICES CLEARINGHOUSE

- Lessons from the Field -

Understanding and Preventing Student Marijuana Use

MARCH 22, 2023 3:00-4:30 PM ET



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This webinar is being recorded and will be archived at the following location:

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Agenda

- 1) Introduction and Logistics
- 2) Welcome
- 3) Marijuana Facts and Use Rates
- 4) Impact of Marijuana on Health, Brain Development and Learning
- 5) Prevention Strategies
- 6) Closing Remarks
- 7) Live Q&A



Meet Our Speakers

Dr. Brooke Hoots

Lead, Cannabis Strategy Unit, Division of Overdose Prevention, Centers for Disease Control and Prevention (CDC)

Dr. Ruben Baler

Health Scientist Administrator, Science Policy Branch, Office of Science Policy and Communications, National Institutes of Health, National Institute on Drug Abuse (NIH/NIDA)

Dr. Bertha Madras

Professor of Psychobiology, Harvard Medical School, Head, Laboratory of Addiction Neurobiology McClean Hospital

Courtney Esparza

Public Health Advisor, Youth Engagement Lead, Office of Prevention Innovation, Substance Abuse and Mental Health Services Administration (SAMHSA)

Dr. Charlene McGunn

Executive Director, Chippewa Valley Coalition for Youth and Families (MI)

Bios for the speakers are archived at the following location:







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Helen Hernandez

ASSISTANT DIRECTOR
DRUG FREE COMMUNITIES
OFFICE OF NATIONAL DRUG CONTROL POLICY
(ONDCP)







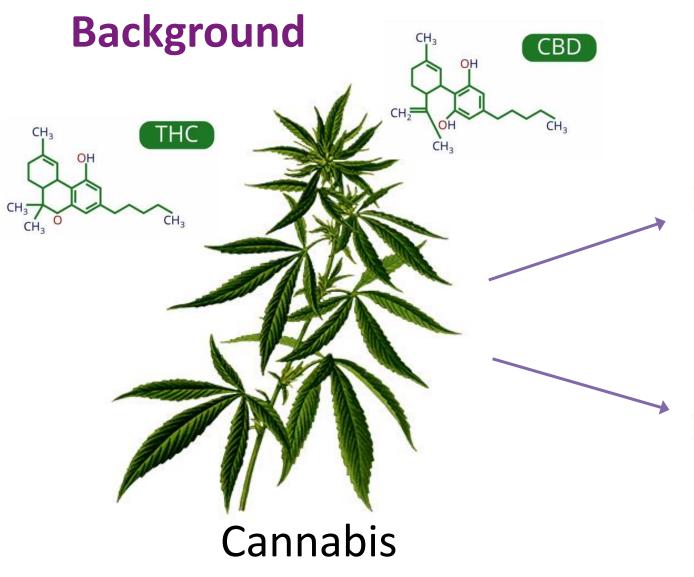
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Dr. Brooke Hoots

CANNABIS STRATEGY UNIT LEAD
CENTERS FOR DISEASE CONTROL AND PREVENTION

CANNABISTA@CDC.GOV





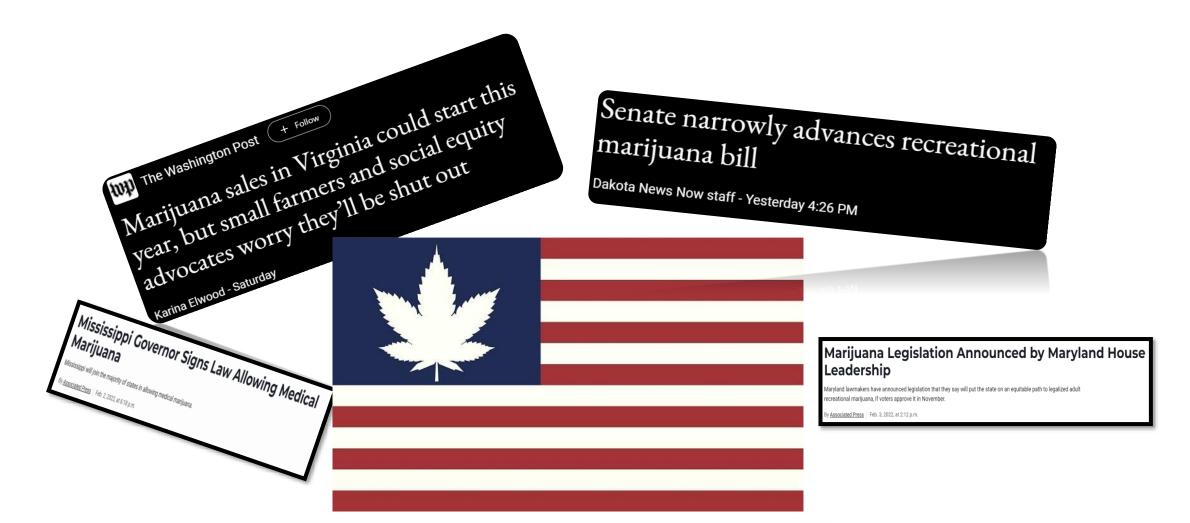
Marijuana

- High delta-9 THC (> 0.3%), Low CBD
- Schedule 1



Hemp

- Low delta-9 THC (≤ 0.3%), High CBD
- Not a controlled substance

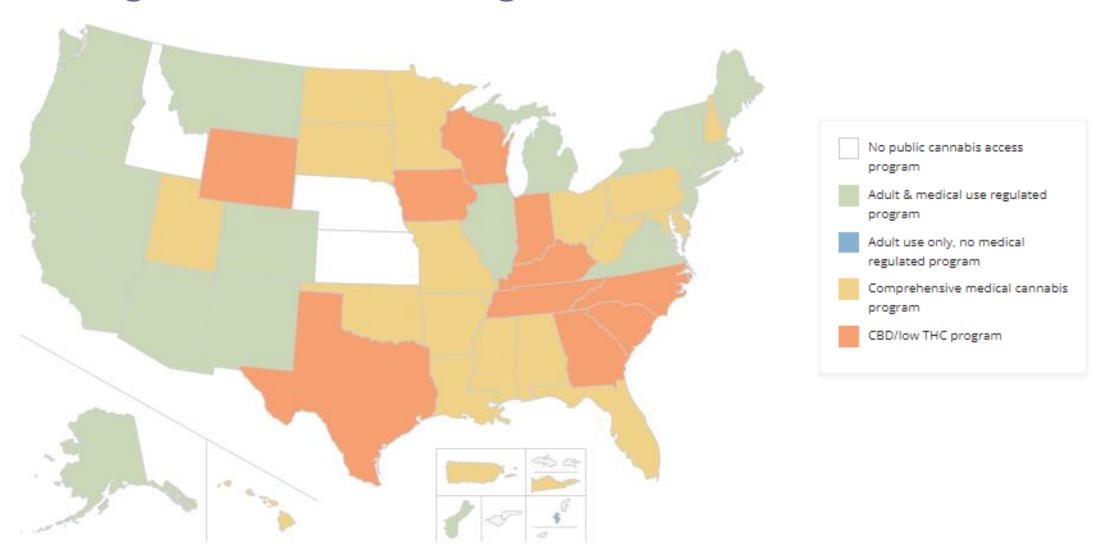


GOP Lawmakers Try Again to Legalize Medical Marijuana

Republican lawmakers are trying again to legalize medical marijuana in Wisconsin

By Associated Press Jan. 26, 2022, at 10:58 a.m.

State Regulated Cannabis Programs



SOURCE: National Conference of State Legislatures https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx

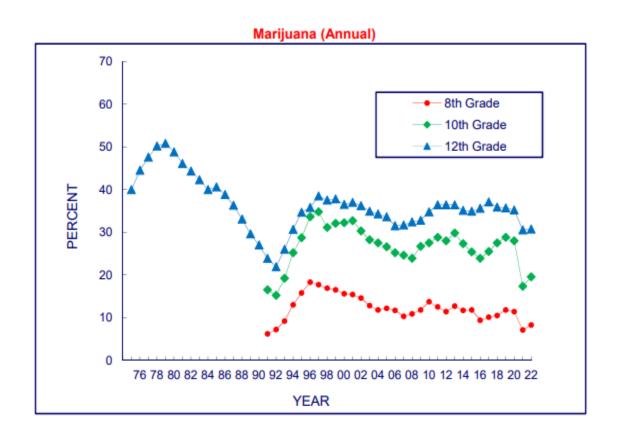
Past-month marijuana use by age group, NSDUH, 2016–2019

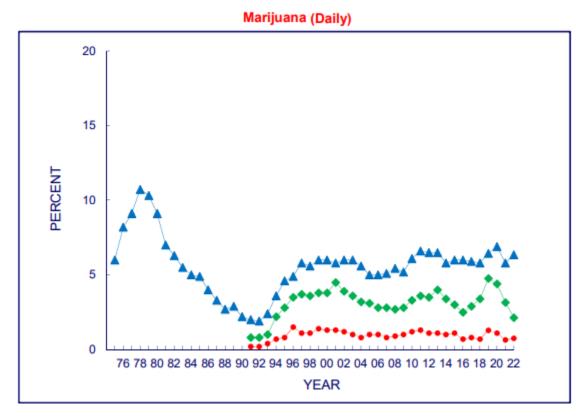


⁺ Difference between this estimate and the 2019 estimate is statistically significant at the .05 level.



Annual and daily marijuana use, Monitoring the Future, 1975–2022





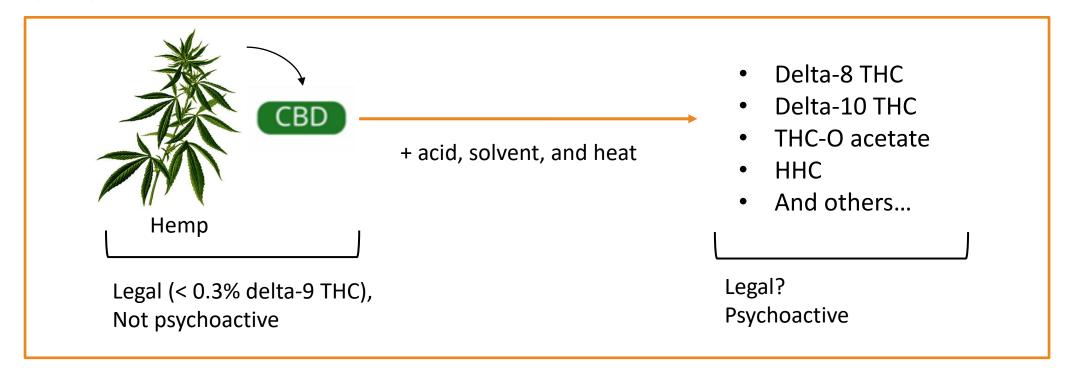
Availability of cannabis and perceived risk of cannabis use, Monitoring the Future, 1975–2021

Availability Risk % saying "fairly easy" or "very easy" to get % seeing "great risk" in using regularly 100 PERCENT PERCENT YEAR YEAR

Mode of use among youth currently using cannabis, 2018

Cannabis Mode of Use	Prevalence of Mode of Use among Past 30-day Cannabis Users		
	England $(n = 342)$	Canada $(n = 625)$	U.S. (n = 546)
Smoke any cannabis	93.8 (321)	88.0 (549)	88.3 (483)
Without tobacco	53.3 (183)	78.7 (497)	82.0 (458)
With tobacco	73.9 (253)	36.4 (228)	34.5 (188)
Vape any cannabis	18.4 (63)	28.0 (175)	37.1 (203)
Dried cannabis	12.3 (42)	19.0 (119)	20.9 (114)
Cannabis oil or liquid	14.3 (49)	18.6 (116)	30.1 (164)
Waterpipe/Bong	22.4 (77)	51.7 (323)	47.4 (259)
Eat or drink cannabis	19.4 (66)	26.6 (166)	29.4 (161)
Cannabis extracts: Oil, wax, shatter	11.0 (37)	22.9 (143)	30.2 (165)
Other	3.1 (11)	4.1 (25)	5.3 (29)

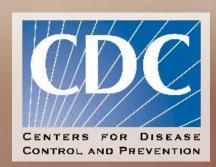
Emerging hemp-derived psychoactive cannabinoids



- These products may have the potential to be confused with hemp or CBD products that are not intoxicating because they are sold by a wide range of businesses that sell hemp.
- The chemical conversion creates byproducts that are not well characterized and could be harmful.



For technical assistance: cannabisTA@cdc.gov



For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.







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Dr. Ruben Baler

HEALTH SCIENTIST
NATIONAL INSTITUTES OF HEALTH
NATIONAL INSTITUTE ON DRUG ABUSE

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Marijuana and the Developing Brain

Ruben Baler, Ph.D. Science Policy Branch – NIDA - NIH





The brain is a product

Upkeep and Maintenance

(metabolism)

Information

(cognition)

Interactions Processing with the world

(behavior)

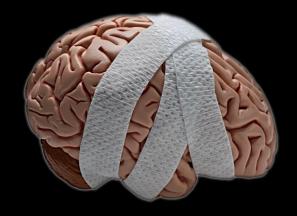
Survive & Reproduce

Design flaws Products Manufacturing errors

Fail:

Extreme Conditions





A brain can fail

Evolutionary mismatch

Developmental errors

Overwhelming events



A brain can fail

Evolutionary mismatch

Developmental errors

Overwhelming events

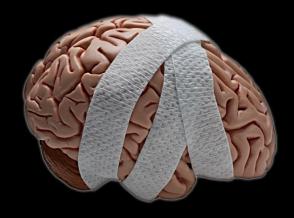
Seek the fattiest meat, the sweetest fruits, the most high-energy foods.









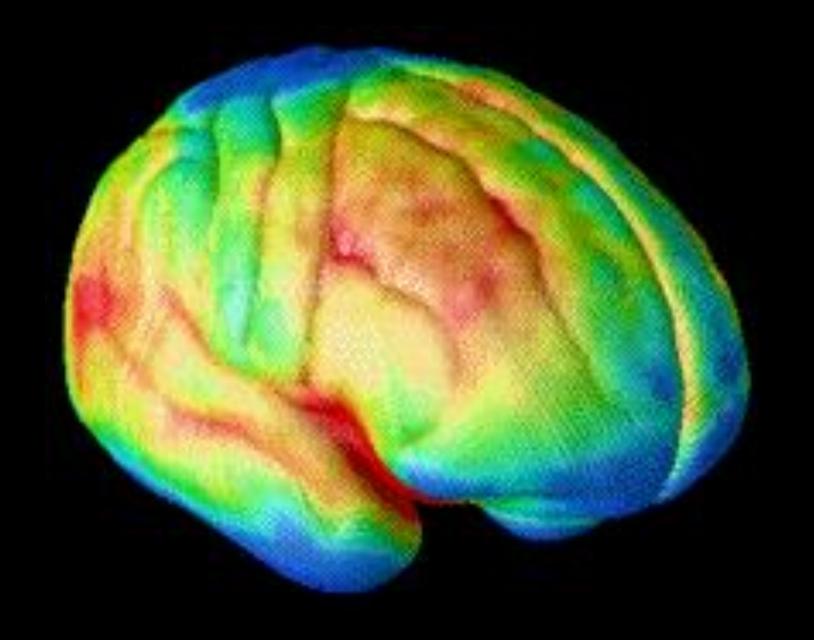


A brain can fail

Evolutionary flaws

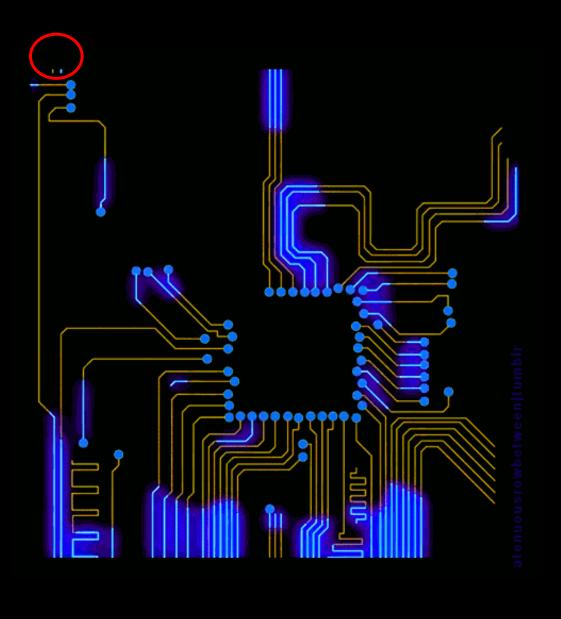
Developmental errors

Overwhelming events





"Programming" a young brain (?)



Meaningful connectivity

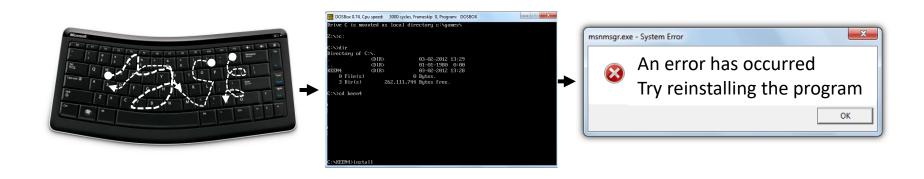
Increasing Bandwidth malnutrition sleep deficits bullying drug use

physical abuse emotional chronic pain neglect

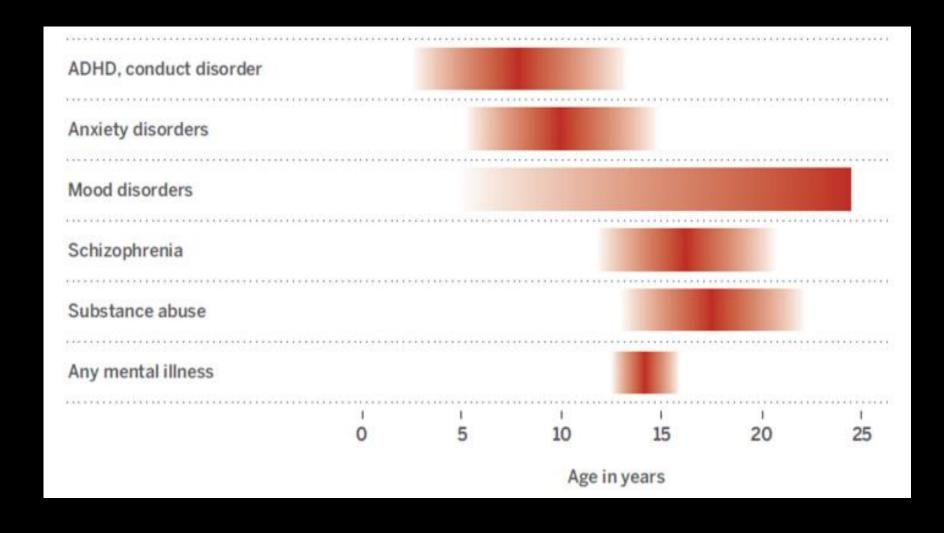


The effects of keyboard scrambling are time dependent





Adolescence is peak time for clinical onset of most mental illnesses.





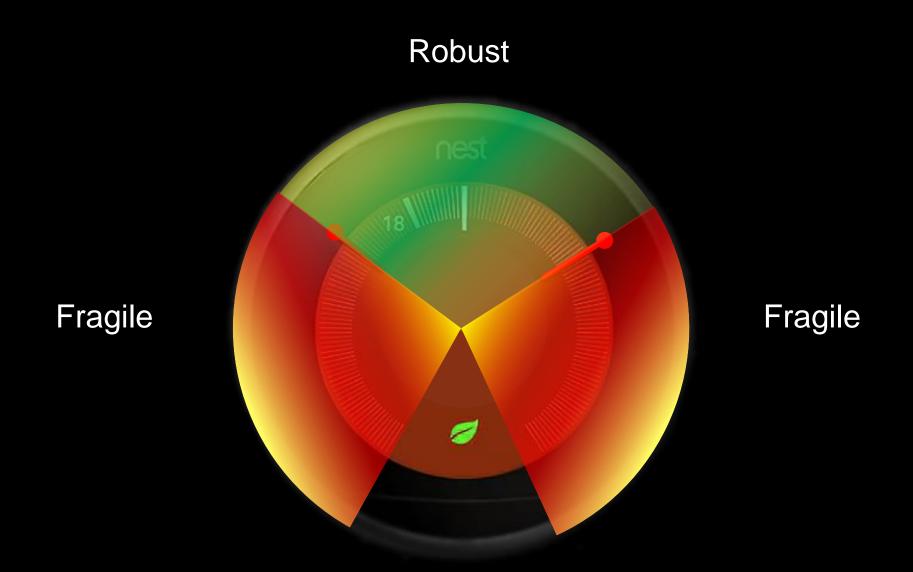
A brain can fail

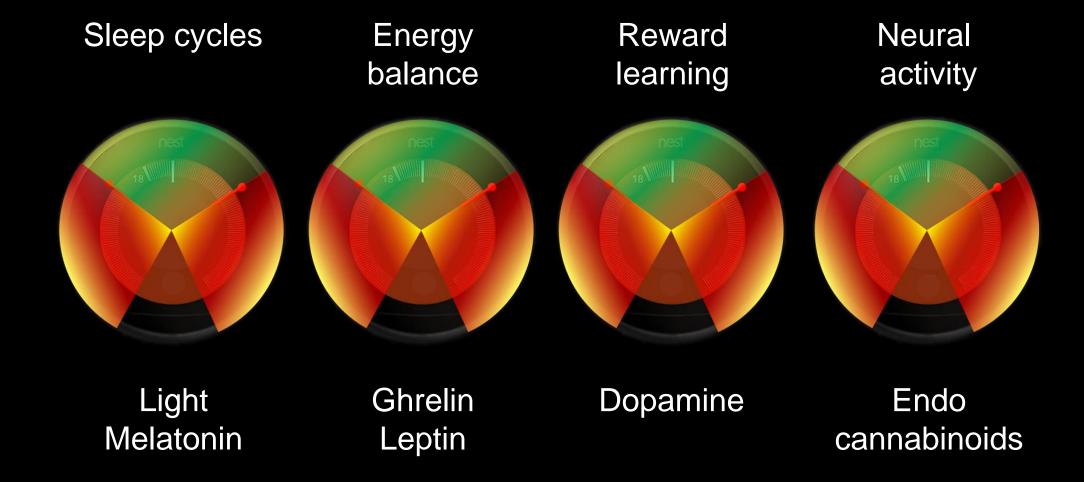
Evolutionary flaws

Developmental errors

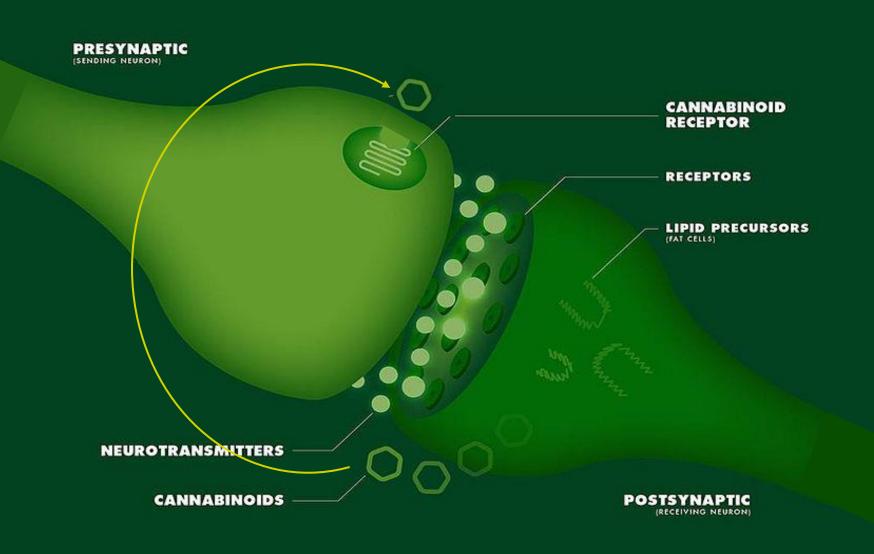
Overwhelming events

Overwhelming basic control systems

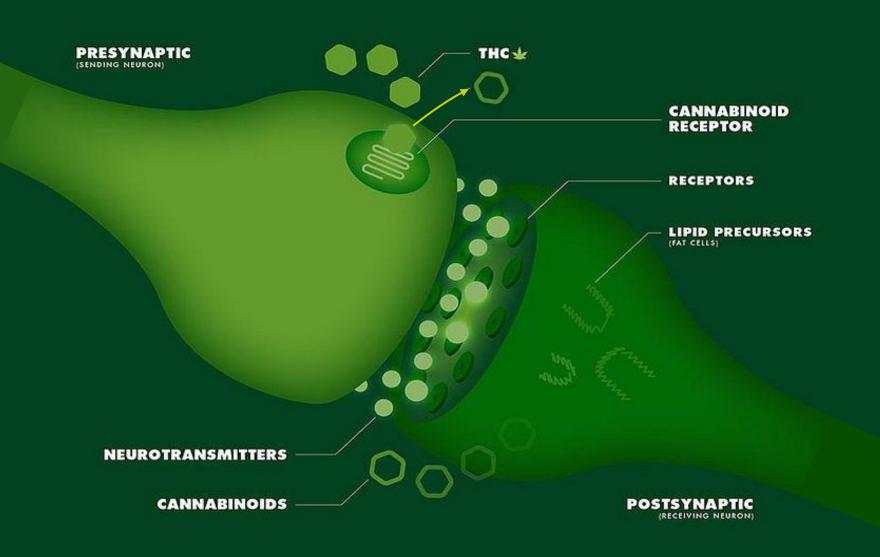


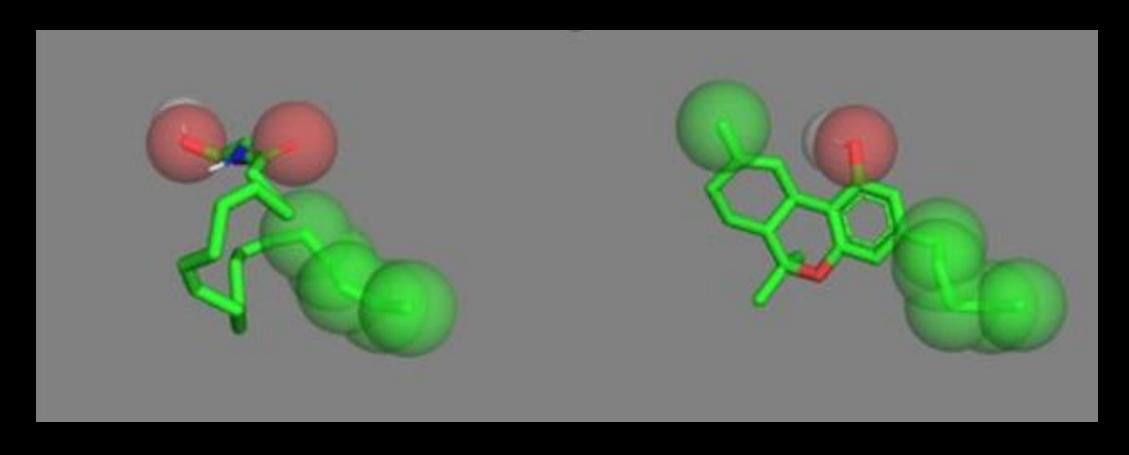


The Endocannabinoid System (on demand control of neurotransmission)



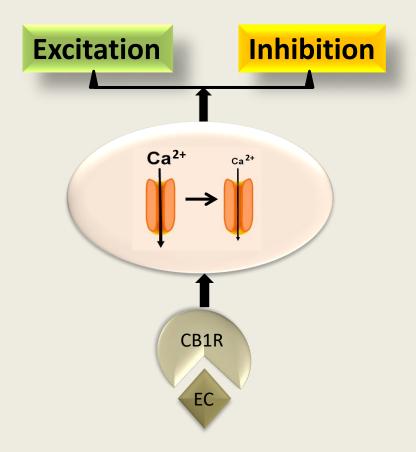
The Endocannabinoid System (on demand control of neurotransmission)

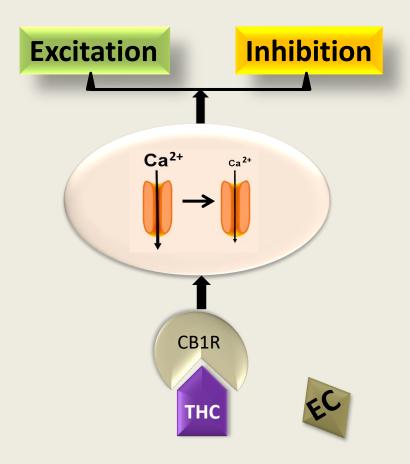




ANANDAMIDE (AEA)

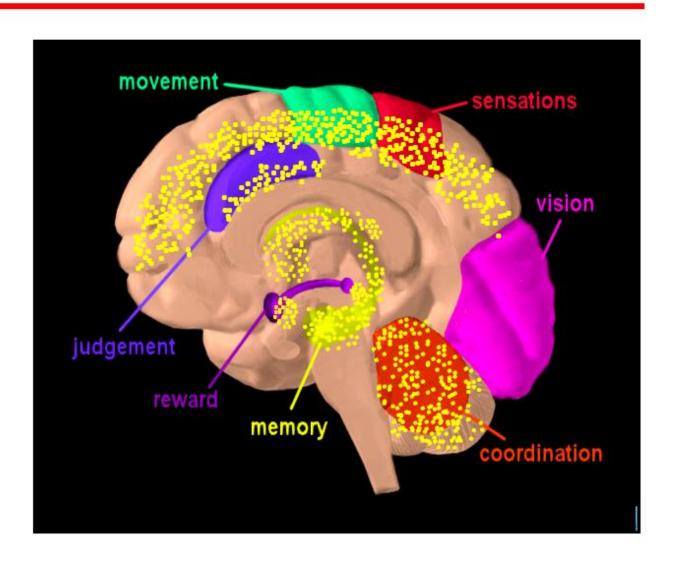
 Δ^9 THC

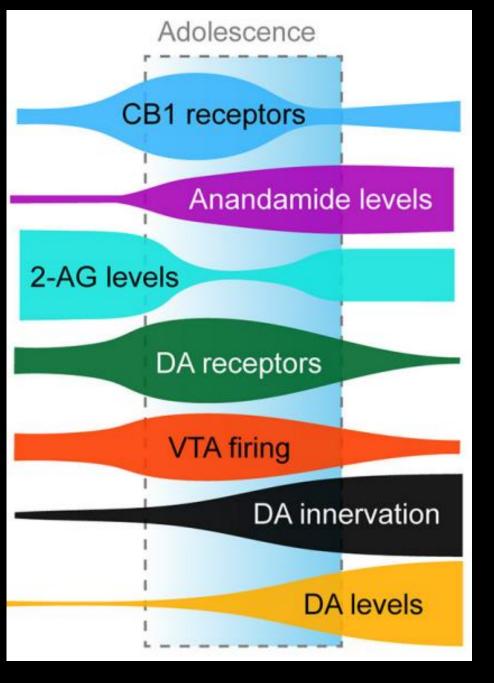




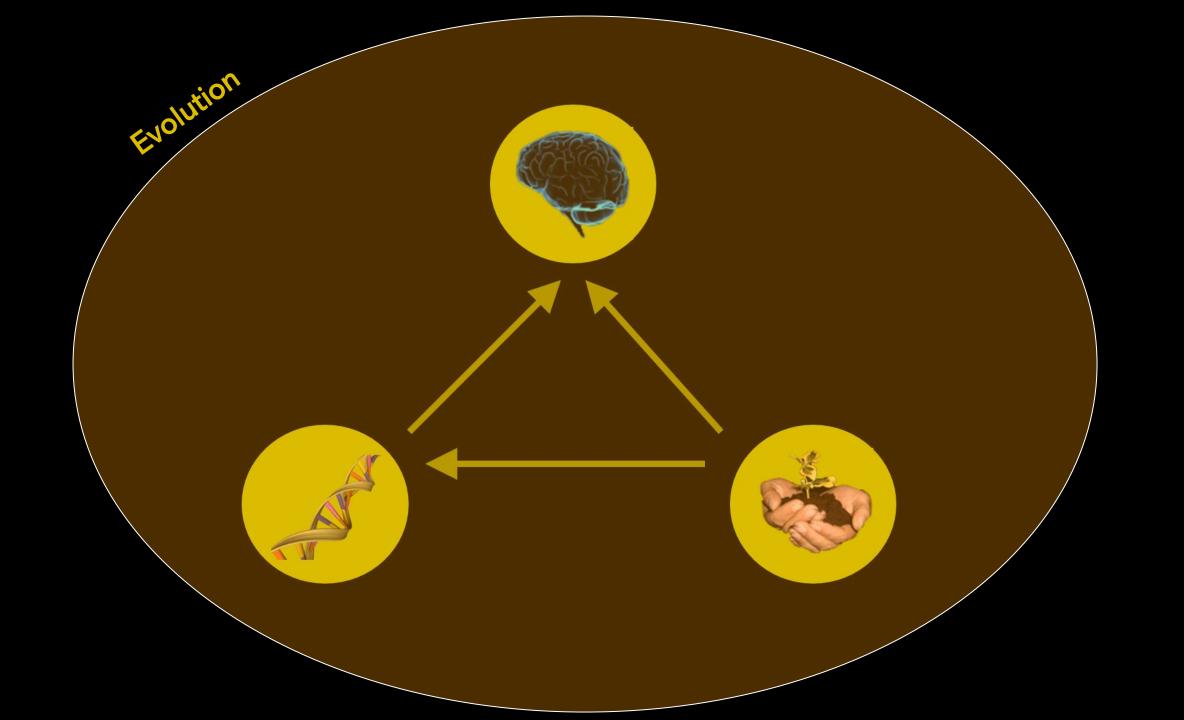
Cannabinoid Receptors Are Located Throughout the Brain and Regulate:

- Memory & Cognition
- Motivation & Reward
- Appetite
- Immunological Function
- Stress
- Movement
- Pain & Analgesia
- Brain Development





What is the Overarching Neuroscientific Lesson for Promoting Mental Health and Increased Resilience?





The brain can fail

Design errors

Manufacturing errors

Extreme conditions



The brain can fail.

Prevention Strategies

Evolutionary mismatch

We must be smarter about how we design our environments

Evolutionary Mismatch







The brain can fail.

Prevention Strategies

Evolutionary Mismatch

We must be smarter about how we design our environments.

Developmental Errors

We have to be far more serious, careful and and committed when it comes to protecting our kids' developing brains. Use the science.

Developmental errors





The brain can fail.

Prevention Strategies

Evolutionary Mismatch

We must be smarter about how we design our environments.

Developmental Errors

We have to be far more serious, careful and and committed when it comes to protecting our kids' developing brains. Use the science.

Overwhelming Events

We must understand that we are robust yet fragile; and educate ourselves and our kids accordingly to be more aware of our strengths and vulnerabilities.

Neuroscience Education in the XXI Century









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Dr. Bertha Madras

PROFESSOR PSYCHOBIOLOGY
HARVARD MEDICAL SCHOOL
HEAD, LABORATORY OF ADDICTION
NEUROBIOLOGY
MCCLEAN HOSPITAL, MA







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PUBLIC HEALTH ADVISOR
YOUTH ENGAGEMENT LEAD
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ADMINISTRATION (SAMHSA)

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Preventing Marijuana Use Among Students

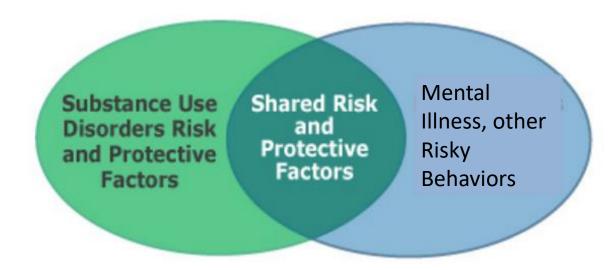
Courtney Esparza, MS, MBA, LPC
Public Health Advisor, Youth Engagement
Office of Prevention Innovation
Center for Substance Abuse Prevention
Substance Abuse and Mental Health Services Administration
U.S. Department of Health and Human Services

Department of Education, Lessons from the Field Webinar Series, March 22, 2023



Effective
Prevention:
Risk and
Protective
Factors

Effective prevention focuses on reducing risk factors, and strengthening protective factors, that are most closely related to the problem being addressed







Bronfenbrenner, 1978





PROTECTIVE FACTORS

- Self-efficacy to say no to substance use
- Future college aspirations
- Peer disapproval of marijuana use
- Involvement in sports and physical activity



RISK FACTORS

- Antisocial behavior
- High sensation seeking
- Aggression
- Use of marijuana may lead to using other substances
- Use of other substances is associated with higher risk of using marijuana
- Perceptions of peer marijuana use
- Low perceived harm of marijuana use
- Genetics





PROTECTIVE FACTORS

- Parental identification*
- Maternal affection
- Higher parental monitoring of child behavior
- Restrictive marijuana specific parental rules
- Perceived parental trust



RISK FACTORS

- Parental acceptance of substance use
- Parental or sibling substance use
- Family conflict
- Poor parent-youth relationships
- Parents who did not graduate high school





PROTECTIVE FACTORS

- School belonging
- School involvement
- Authoritative school environment
- School connectedness
- Remedial approach to marijuana policy violations



RISK FACTORS

- Low policy enforcement
- Out of school suspension
- High absenteeism

Source: https://www.samhsa.gov/resource/ebp/preventing-marijuana-use-among-youth

Potential Risk Factors for Substance Use Disorders and Mental Illness: Among Adolescents Aged 12 to 17

5.5% of youth were approached by someone selling drugs in the past month.

6.5% of youth did not have someone with whom they could talk about problems.

Nearly 1 in 5
(18.6%) youths'
parents did not let
them know when
they were proud
of something the
youth had done.

Nearly 1 in 4 (24.0%) youth participated in one or fewer activities.*



^{*}Activities could be school-based, community-based, church or faith-based, or other activities.

Prevention Intervention Categories

Universal - The broadest approach, designed to reach all individuals within a particular population by reducing risk factors and promoting protective factors.

Examples: Environmental strategies and programs that target individuals in schools, whole communities, or workplaces.

Selective - Target biological, psychological, or social risk factors that are more prominent among groups at high risk, increase protective factors. The audience for these interventions is often families, parents, or young people, or some combination.

Examples: Prevention education for youth groups or peer support groups for young adults with a family history of SUD.

Indicated - Target individuals who are already involved in risky behavior, such as substance use, that puts them at risk for SUD.

Examples: Referrals to support services for youth who screen positive for substance use, screening and consultation for families of youth admitted to hospitals with potential alcohol-related injuries.



Comprehensive Approach

- Prevention Programs -

Marijuana Specific and other Evidence Based Substance Use Prevention Programs

Promising Marijuana Use Prevention Interventions	Description	Primary Age and/ or Grades	Expected Outcomes
Teen Marijuana Check-Up	A brief motivational enhancement intervention publicized as a non-pressured and confidential opportunity for the teen marijuana smoker to "take stock" of his/her use. The intervention is designed for in-school implementation and intended to elicit the teen's voluntary participation. Cost: It is estimated that the program costs approximately \$100 per participant.	Grades 9 to 12	Reductions in quantity and frequency of marijuana use. ⁴
Cannabis/Marijuana Awareness and Prevention Toolkit	A theory-based and evidence-informed curriculum designed to be implemented by educators, parents, and/or community-based organizations. The curriculum is aimed at preventing middle and high school students from using marijuana. Cost: This program is available for free.	Middle and High School Students	Prevention of marijuana use (studies currently in progress).
SPORT	A single-session screening and brief intervention designed to promote positive healthy behaviors, such as engaging in physical exercise, while also preventing substance use. The creators of SPORT recently developed a new program "Marijuana Prevention Plus Wellness." This program is adopted from the original evidence-based SPORT program and is designed specifically to prevent marijuana use. **Cost: The module costs \$499 per program (separate programs for high school, middle school, adolescent).	Ages 8 to 18; Elementary, Middle, and High School Students ⁵	Prevention of marijuana use and promotion of healthy behaviors, such as engaging in physical activity. ⁵

- Environmental Strategies - Marijuana Specific

Strategy	Characteristics	Expected Outcomes
Regulation of the price of marijuana	Increasing taxes (either by weight, THC content, or price). Banning price promotions (such as coupons, two for one deals, and happy hours).	Decrease in youth marijuana use. Decrease in use of high potency marijuana products. ¹⁹ This study uses administrative records from the Washington State Liquor and Cannabis Board. ¹⁹
Regulation of marijuana retail outlets	 Limiting number and locations of retailers through licensing or zoning. Limiting hours/days of sale. Banning those under the age of 21 in dispensaries. Regulating where marijuana and related products can be sold. 	Decrease in youth marijuana use, as reported in a study that includes data from a cross-section of 6th, 8th, and 11th graders in 35 Oregon counties. ²⁰
Regulation of marijuana product manufacturing and packaging	Banning marijuana products with added synthetic flavors and odors. Banning THC-infused edibles likely to attract children and youth, such as candies, cookies, and beverages. Banning THC-infused alcohol and tobacco products. Requiring plain product packaging. Requiring transparency on product labels, including THC and CBD content and ingredients. Require prominent graphic marijuana warning labels with varied and rotating messaging.	Reduction in youth marijuana initiation. Reduction in youth marijuana use and use disorder. Reduction in use of flavored edibles. Increased health knowledge. Increased motivation to quit. Reduced brand awareness and identification. Reduction in product appeal. Increase in understanding of the risks of marijuana. ²¹⁻²³
Limitations on marijuana advertising and marketing	Banning marijuana advertising on television, radio, billboards, and social media. If not banned, limiting advertising with youth audiences. Removing marketing, promotion, and advertising dollars from admissible business expenses for state income tax calculations. Funding public health media campaigns. Prohibiting health and therapeutic claims.	 Increase in understanding the risks of marijuana. Reduction in positive perceptions of marijuana use. Decrease in youth marijuana use. Reduction in advertising by marijuana retailers.²⁴⁻²⁵ The Davis study uses data from 6th through 12th graders in seven communities.²⁵



Challenges to Marijuana Prevention Efforts

- Greater public acceptance
- Declining perception of risk
- Increasing availability
- Rapidly evolving policy landscape at the state level
- Product diversification
- Pervasive marketing
- More research needed on youth marijuana use specific prevention programs and environmental strategies, and the effectiveness of those strategies among diverse populations (inclusive of race, ethnicity, age, and sex)



Intervening earlier and more broadly can interrupt potential risk pathways, move children towards protective pathways, and create a better foundation for substance use prevention and health promotion in adolescence and beyond.

- Partnership to End Addiction



Hart's Ladder of Participation

Authentic youth engagement recognizes young people's right to participate in decisions that impact them.

It acknowledges the great skills and strengths they contribute to their communities.

It views young people as valued stakeholders in creating effective and inclusive policies, programs and environments.

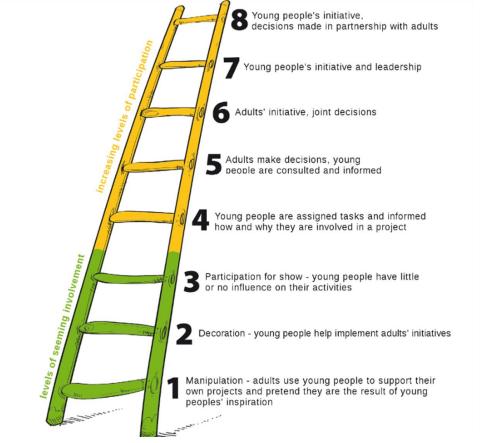


Photo Credit: Trainers Library

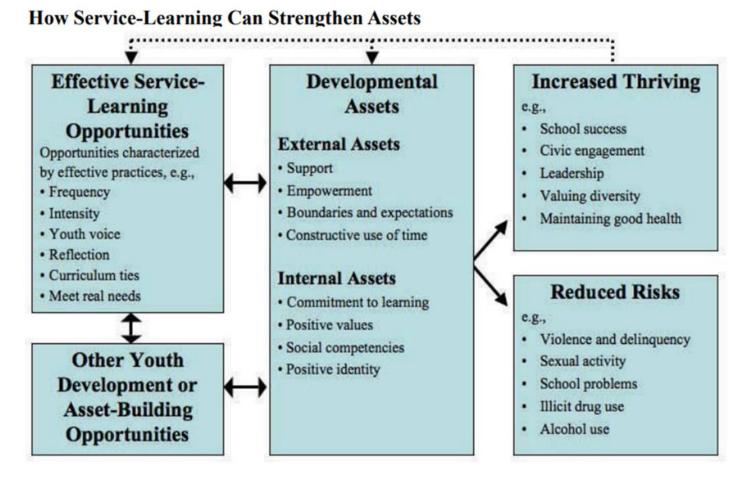


Service Learning is a form of experiential education where learning occurs through a cycle of action and reflection as students seek to achieve real objectives for the community and deeper understanding and skills for themselves

- Vanderbilt University

Developmental Assets Model









The time, attention, and emotional support school staff give to students can engage them in school and learning.

School Connectedness

Students' belief that peers and adults in the school support, value, and care about their individual wellbeing as well as their academic progress.

It is an important protective factor that promotes the health and well-being of students.

Students who feel more connected to school are:

- Less likely to engage in risky behaviors (violence, sexual health, and substance use)
- More likely to engage in positive health behaviors (physical activity and healthy eating)
- More likely to have higher grades and test scores, have better school attendance, and graduate high school
- Less likely to have emotional distress and thoughts of suicide among adolescents



Providing professional development and support for school staff can help them meet the diverse emotional and social needs of their students.

School Connectedness Strategies

CDC identified four school connectedness interventions that led to declines in negative health behaviors and experiences among students, including substance use.

- Family/community mentoring programs
- Service-learning opportunities
- Student-led clubs to provide safe spaces
- Professional development for educators on classroom management

Communication Pathway



ESTABLISH TRUST

Build rapport and establish trust.

- 1. Create a safe space.
- 2. Be authentic.
- 3. Approach the conversation informally.
- 4. Do more listening than talking.
- 5. Be transparent and trustworthy.
- 6. Pay attention to body language.



GATHER INSIGHTS

Seek guidance and input from youth about what matters to them.

- 1. What matters most to you in your life? And why?
- 2. What do you look forward to most in the coming year (or after you graduate, or beyond)? And why?
- 3. When you're faced with making a tough choice or decision, what do you consider or think about most?





SUGGEST ACTION

Select one or more actions to suggest.

Explore alternative ways of dealing with stress.

Make your own personal commitment or pledge to avoid alcohol and drugs.

Talk to your friends and encourage them not to use drugs and alcohol.

Educate yourself about drugs and alcohol.

Talk to someone if you feel tempted or pressured to use drugs or alcohol.



MAKE THE CASE

Marijuana

Physical Health Impact

Since your brain is still developing, using marijuana during your teenage years can alter your brain chemistry. This affects your ability to pay attention and remember things, which can result in lower test scores and academic success.

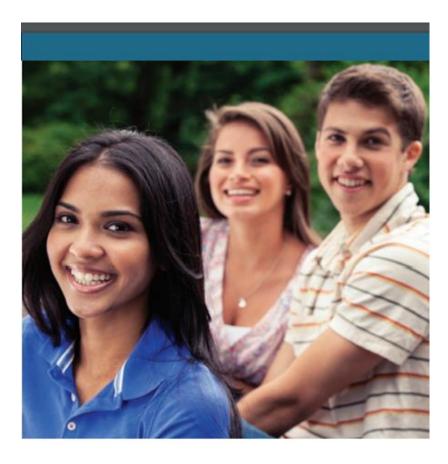
Mental Health Impact

You might have heard people say marijuana use is fun. But, for some people, it leads to extreme paranoia and fear, scary hallucinations and dependency.

Data Source: 2022 Getting Candid Framing the Conversation around Youth Substance Use Prevention, National Council for Mental Wellbeing and CDC



Framing the Conversation



MIDDLE SCHOOL YOUTH

HIGH SCHOOL YOUTH

THE FUTURE

Don't let drug and alcohol use change or control your plans for the future.

RISK OF ADDICTION

Drugs and alcohol change parts of your brain that impact how you think and act. The more you use them, the harder it can be to stop even if you want to.

RELATIONSHIPS*

There are people in your life who matter to you and care about you. And you try hard not to let them down.

There are people in your life who matter to you and care about you. And you try hard to make them proud.

ACTIVITIES

Participating in sports, music, hobbies or other activities can help you build friendships, stay in shape, get into college and receive scholarships, and have fun.

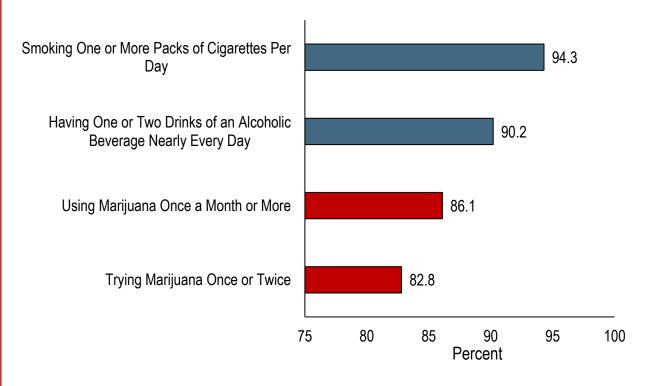
SELF-AFFIRMATION

You respect yourself and want to make decisions that are best for you. Trust yourself and your choice not to use drugs or alcohol.

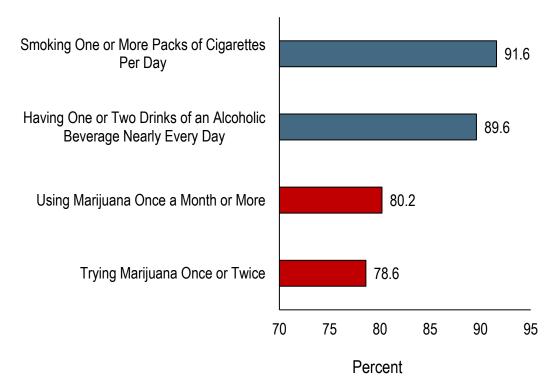
Relationships: Perceptions on Marijuana Use

Ages 12-17

Perceived that Parents Would Strongly Disapprove Substance Use Behavior



Perceived that Close Friends Would Strongly Disapprove Substance Use Behavior





5 Tips For a Productive Conversation

- **Be genuine.** Young people can see right through an adult who is "faking it." If you're feeling uncomfortable in a discussion with a young person, admit it. Say something like, "This is hard for me to talk about, so I totally understand if it's difficult for you too."
- **Be careful about using slang.** You might think you are "hip" and "with it," but trying to use slang that you don't normally use just to "connect" with a young person is a bad strategy—they'll be able to tell immediately. Stick with language you're comfortable using.
- **Allow for silence.** Just like anyone, young people may struggle at times to express what they want to say. Interrupting a silent moment may prevent someone from having enough time to formulate their thoughts—be patient.
- Switch up the setting. Where you have a conversation about mental health or substance use could make you or the person you're talking to more comfortable. Sometimes talking while doing an activity can be helpful
- **Don't trivialize their feelings**. Good advice for any conversation. Mental health challenges can occur at any age. Wondering what a young person has to be depressed or anxious about implies that their life experiences and emotions are less valid just because of their age.

Services Administration

Thank You

SAMHSA's mission is to lead public health and service delivery efforts that promote mental health, prevent substance misuse, and provide treatments and supports to foster recovery while ensuring equitable access and better outcomes.

courtney.esparza@samhsa.hhs.gov

www.samhsa.gov

1-877-SAMHSA-7 (1-877-726-4727) ● 1-800-487-4889 (TDD)









BEST PRACTICES CLEARINGHOUSE



Dr. Charlene McGunn

EXECUTIVE DIRECTOR
CHIPPEWA VALLEY COALITION FOR YOUTH
AND FAMILIES (MI)

cmcgunn@cvs.k12.mi.us



www.cvcoalition.org

We join School, Family, and Community in a partnership to promote healthy, resilient, and drug free youth and to prevent youth suicide.

Youth Marijuana Prevention Strategies

Charlene McGunn Ph.D. Executive Director

Youth Marijuana Prevention Strategies Mobilize Your Community

- •Engage Key Stakeholders School, Churches, and Other Community Sectors
- Create Local Partnerships
- Join Regional and State-Wide Partnerships
- Create Dissemination Networks and Expand to a Broader Base
- Consider Messaging Consider the Focus
 Potency
 Teen Brain Development Academic Performance, Addiction, Public Safety
 Marijuana Use and Mental Health
- Consider Your Audience Social Norming
- Launch a Social Media Campaign
- Train Coalition Members on Advocacy vs. Lobbying
- Use Youth as a Resource in Their Schools and the Community

Mobilize Your Youth

Our Coalition Teen Council (Youth) Members:

Help Create a Positive School Climate
Serve as Role Models
Update the Coalition about Youth Issues
Initiate Prevention Activities in Their Schools
Engage in Cross-Age Programming
Raise Parental Awareness of the Issues
Provide Education in Their Community
Assist the Coalition with Messaging
Provide Access to Youth Networks
Represent the Coalition with Media
Lend Their Tech, Video, & Social Media Skills
Recruit Other Members

Are Prepared to Take "Center Stage"

Understanding of Drug Effects
Understanding of Related Issues
Leadership Training
Public Presentation
Advocacy vs. Lobbying
Relating to Print and Broadcast Media
Have Their Own Organizational Structure







172 Youth Members

Educating Students, Parents, School Staff, and Community About the Dangers of Marijuana!

Free Online Tool Kit

- Lesson for High School Health Classes (PowerPoint with video)
- Lesson for Middle School Health classes (PowerPoint with video)
- Parent Fact Sheets
- Parent Postcard Mailers
- Social Media Posts & Tweets



Vape and Opioid Use Prevention Lessons
Suicide Prevention Information
Link to Life of an Athlete Prevention
Information

www.cvcoalition.org



Thank You!

Should you have any questions, please contact us at NCSSLE@air.org or 800-258-8413. We are happy to help!

NCSSLE Website

https://safesupportivelearning.ed.gov

Best Practices Clearinghouse

https://bestpracticesclearinghouse.ed.gov/

Next Lessons from the Field and Human Trafficking Series Webinars

- April 12: Student Nutrition and Physical Movement
- April 19: Forced Criminality in Human Trafficking
- April 26: Full-Service Community Schools



Feedback Form





[NCSSLE] 2023 - Lessons from the Field - Understanding and Preventing Student Marijuana Use

Thank you for attending the webinar, *Understanding and Preventing Student Marijuana Use*, on March 22, 2023. To best serve you, we would greatly appreciate receiving your feedback on the webinar.

1. Prior to the webinar, how knowledgeable were you about the webinar's topic?
Not At All Knowledgeable
Somewhat Knowledgeable
Very Knowledgeable
2. Overall this webinar was a good use of my time.
Strongly Disagree
Somewhat Disagree
Somewhat Agree
Strongly Agree
3. This webinar improved my understanding of the covered topic.
Strongly Disagree
Somewhat Disagree
Somewhat Agree
Strongly Agree

4. Overall, how would you rate the quality of this webinar, such as the communication style of the presenters and the clarity of the webinar content?

https://www.surveymonkey.com/r/LFTF_Session39







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Live Q&A