Prevention Matters! Considering Associations Between Substance Use and Mental Health

CSHRB CENTER FOR THE STUDY OF HEALTH AND RISK BEHAVIORS
@cshrb_uw

Jason R. Kilmer, Ph.D.
University of Washington
Associate Professor
Psychiatry & Behavioral Sciences
Adjunct Associate Professor
Psychology

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Overview of this presentation

- **Special thank you to:**
  - **Eric Davidson and Annabelle Escamilla**
  - **All of you for doing what you do for students on your campus and in your community**
  - **What I said I would cover:**
  - In this opening keynote, we will consider ways in which alcohol and cannabis use can exacerbate or even cause mental health concerns that students may be struggling with, including possible risk factors for suicide. Implications for prevention, intervention, and public health will be discussed.
    - Participants will be able to describe "alcohol myopia" and how this relates to suicide risk.
    - Participants will be able to describe at least one potential unwanted outcome associated with the use of high potency cannabis.
    - Participants will be able to discuss at least one implication for prevention, intervention, or public health.

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Margaret Mead

- **"What is the first sign you look for to tell you of an ancient civilization? How do you know they were civilized? Was it some instrument, a tool, an article of clothing?"**
- **"A healed femur."**

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Substance Use Data from Monitoring the Future Study

- Alcohol
  - Past year
    - 80.5% report any alcohol use
  - Past month
    - 62.5% report any alcohol use
  - 5+ drinks in a row in past 2 weeks
    - 27.7% at least once
  - 10+ drinks in a row in past 2 weeks
    - 5.2% at least once

Source: Patrick, et al. (2023)

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Cannabis Use Data from Monitoring the Future Study

- College students
  - 40.9% report past year use
  - 22.1% report past month use
  - 4.7% report use 20+ days in past month

Source: Patrick, et al. (2023)

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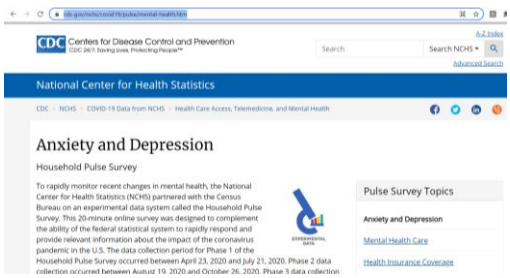
https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm



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Symptoms of anxiety disorder
January 2019 – March 2019: 8.3%
April 2019 – June 2019: 8.1%

Symptoms of depressive disorder
January 2019 – March 2019: 6.7%
April 2019 – June 2019: 6.5%

Source: National Center for Health Statistics w/Census Bureau, Household Pulse Survey

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Symptoms of anxiety disorder
January 2019 – March 2019: 8.3%
April 2019 – June 2019: 8.1%
May 14-19, 2020: 28.2%

Symptoms of depressive disorder
January 2019 – March 2019: 6.7%
April 2019 – June 2019: 6.5%
May 14-19, 2020: 24.4%

Source: National Center for Health Statistics w/Census Bureau, Household Pulse Survey

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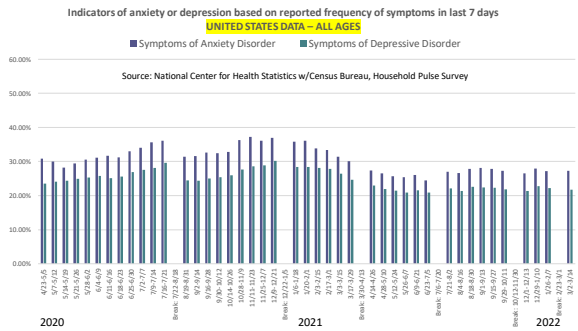

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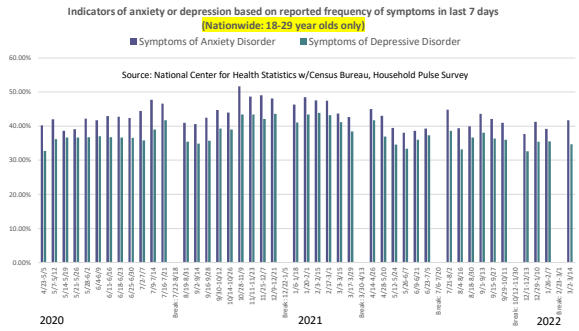

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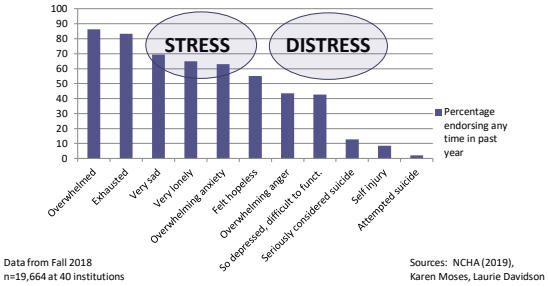

Data from Fall 2018
n=19,664 at 40 institutions

Sources: NCHA (2019),
Karen Moses, Laurie Davidson

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Research that considers links between substance misuse and suicide risk

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Hufford, M.R. (2001). Alcohol and suicidal behavior. *Clinical Psychology Review, 21* (5), 797-811.

Pergamon

PII S0272-7358(00)00070-2

ALCOHOL AND SUICIDAL BEHAVIOR

Michael R. Hufford

University of Montana

ABSTRACT. *Alcohol dependence and alcohol intoxication are important risk factors for suicidal behavior. However, the mechanism for the relationship remains unclear. This review presents a conceptual framework relating alcohol to suicidal behavior. Distal risk factors create a statistical potential for suicide. Alcohol dependence, as well as associated comorbid psychopathology and negative life events, act as distal risk factors for suicidal behavior. Proximal risk factors determine the timing of suicidal behavior by translating the statistical potential of distal risk factors into action. The acute effects of alcohol intoxication act as important proximal risk factors for suicidal behavior among the alcoholic and nonalcoholic alike. Mechanisms responsible for alcohol's ability to increase the proximal risk for suicidal behavior include alcohol's ability to: (1) increase psychological distress, (2)*

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Alcohol-related risk factors for suicide (Hufford, 2001)

- **Distal risk factors**
  - Relatively stable characteristics/ events occurring in the weeks, months, or years preceding suicidal behavior.
- **Proximal risk factors**
  - Variables that increase suicide risk in moments immediately before suicidal behavior

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Distal factors

- Alcohol Dependence
- Alcohol dependence and co-morbid psychopathology
- Alcohol dependence and negative life events

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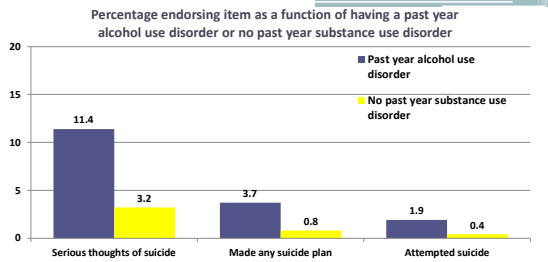

Source: SAMHSA (2023)
https://www.samhsa.gov/data/report/2021-nsduh-detailed-tables
Table 6.79 B (page 1,156 of 1,818)

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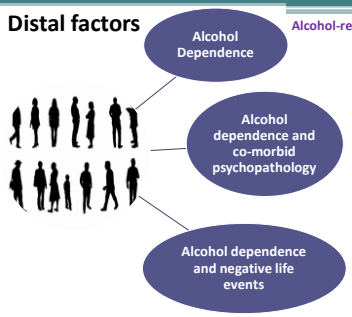

Alcohol-related risk factors for suicide (Hufford, 2001)

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Alcohol-related risk factors for suicide (Hufford, 2001)

- **Distal risk factors**
  - Alcohol dependence and negative life events
    - Interpersonal loss
      - Over one-fourth of those with alcohol dependence who died by suicide experienced interpersonal loss within 6 weeks of their death (Murphy, et al., 1979)
    - Relapse
      - Those with alcohol dependence are at greater risk for suicide during periods of active drinking

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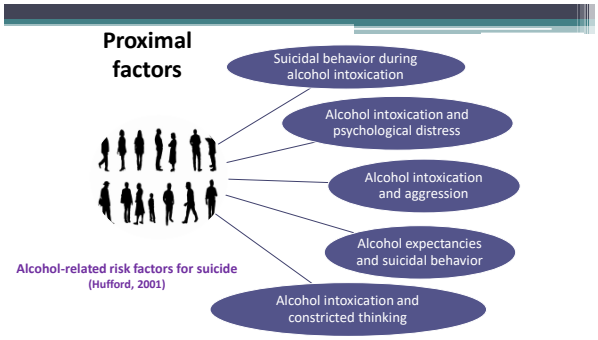

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Alcohol-related risk factors for suicide (Hufford, 2001)

- **Proximal risk factors**
  - **Suicidal behavior during alcohol intoxication**
    - **Looking at odds ratios, Borges & Rosovsky (1996) showed consumption of over 10 standard drinks increases risk for suicide attempts *90 times* in comparison to abstinence**
    - **Acute intoxication greater risk than habitual**

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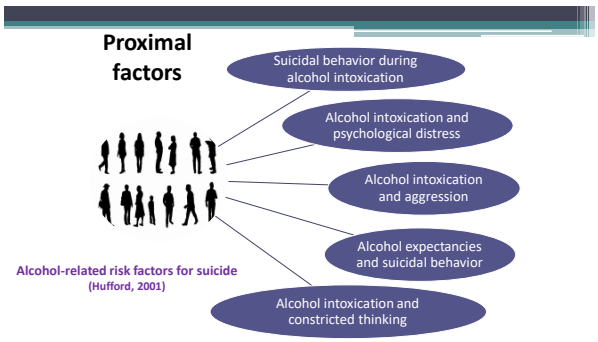

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Alcohol-related risk factors for suicide (Hufford, 2001)

- **Proximal risk factors**
  - Alcohol intoxication and constricted thinking
    - Alcohol myopia (Steele & Josephs, 1990)

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Steele, C.M., & Josephs, R.A. (1990). Alcohol myopia: Its prized and dangerous effects. *American Psychologist, 45* (8), 921-933.

Alcohol Myopia

Its Prized and Dangerous Effects

Claude M. Steele and Robert A. Josephs *University of Michigan*

ABSTRACT: This article explains how alcohol makes social responses more extreme, enhances important self-evaluations, and relieves anxiety and depression, effects that underlie both the social destructiveness of alcohol and the reinforcing effects that make it an addictive substance. The theories are based on alcohol's impairment of perception and thought—the myopia *it causes—rather than on the ability of alcohol's pharmacology to directly cause specific reactions or on expectations associated with alcohol's use. Three conclusions are offered (a) Alcohol makes social behaviors more extreme by blocking a form of response conflict. (b) The same process can inflate self-evaluations. (c) Alcohol myopia, in combination with dis-*

icant effects, a straightforward idea has dominated the thinking of laymen and scientists alike: Such effects stem directly from the pharmacological properties of alcohol, much the way relaxation stems from the pharmacological properties of valium. We know, for example, that people often drink alcohol to get the effects they assume it will directly cause: relaxation, a better mood, courage, social ease, and so on (e.g., Goldman, Brown, & Christiansen, 1987; Leigh, 1989; Maisto, Connors, & Sachs, 1981). This idea explains both heads of the beast; some of these direct effects, such as aggression and hostility, can be socially destructive, and others, such as relaxation and tension reduction, are reinforcing enough to make alcohol a po-

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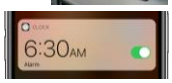
"Alcohol Myopia"

Impelling Cues

Alcohol impairs information processing, **narrowing attention** to only the most salient internal and environmental cues.

?

Inhibiting Cues



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Alcohol-related risk factors for suicide (Hufford, 2001)

- **Proximal risk factors**
  - **Alcohol intoxication and constricted thinking**
    - **Alcohol myopia** (Steele & Josephs, 1990)
      - *"The immediate, and usually painful, aspects of experience take on disproportionate weight in the delicate balance between choosing life over death among those contemplating suicide (p. 804)."*
    - **Can interfere with inhibition conflict**
      - *"Alcohol intoxication acts to interrupt inhibition conflict through alcohol myopia, leading to more excessive responses than would have occurred while sober (p. 804)."*

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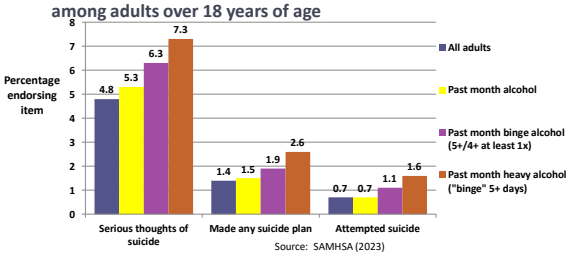
Past month alcohol use and relation to suicide among adults over 18 years of age



Source: SAMHSA (2023)
https://www.samhsa.gov/data/report/2021-nsduh-detailed-tables
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"Alcohol prevention is suicide prevention…"

Laurie Davidson, Suicide Prevention Resource Center

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Cannabis Use Associated with Risk of Psychiatric Disorders (Hall & Degenhardt, 2009; Hall, 2009; Hall 2013)

- **Schizophrenia**
  - Those who had used cannabis 10+ times by age 18 were 2-3 times more likely to be diagnosed with schizophrenia
  - "13% of schizophrenia cases could be averted if cannabis use was prevented (Hall & Degenhardt, 2009, p. 1388)"
- **Depression and suicide**
  - "Requires attention in cannabis dependent" (Hall, 2013)

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Screening

- **Screening suggestions**
  - Cannabis Use Disorder Identification Test-Revised (CUDIT-R)
  - http://www.warecoveryhelpline.org/wp-content/uploads/2018/04/CUDIT.pdf

The Cannabis Use Disorder Identification Test - Revised (CUDIT-R)

Have you used any cannabis over the past six months? Yes_____ No_____

If you answered "Yes" to the previous question, please answer the following questions about your cannabis use. Circle the response that is most correct for you in relation to your cannabis use over the *past six months.*

1. How often do you use cannabis?	Never 0	Monthly or less 1	2-4 times a month 2	2-3 times a week 3	4+ times a week 4
2. How many hours were you "stoned" on a typical day when you had been using cannabis?	Less than 1 0	1 or 2 1	3 or 4 2	5 or 6 3	7 or more 4
3. How often during the past 6 months did you find that you were not able to stop using cannabis once you had started?	Never 0	Less than monthly 1	Monthly 2	Weekly 3	Daily/almost daily 4
4. How often during the past 6 months did you fail to do what was normally expected from you because of using cannabis?	Never 0	Less than monthly 1	Monthly 2	Weekly 3	Daily or almost daily 4

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5. How often in the past 6 months have you devoted a great deal of your time to getting, using, or recovering from cannabis?	Never 0	Less than monthly 1	Monthly 2	Weekly 3	Daily/almost daily 4
6. How often in the past 6 months have you had a problem with your memory or concentration after using cannabis?	Never 0	Less than monthly 1	Monthly 2	Weekly 3	Daily or almost daily 4
7. How often do you use cannabis in situations that could be physically hazardous, such as driving, operating machinery, or caring for children?	Never 0	Less than monthly 1	Monthly 2	Weekly 3	Daily/almost daily 4
8. Have you ever thought about cutting down, or stopping, your use of cannabis?	Never 0		Yes, but not in the past 6 months 2		Yes, during the past 6 months 4

This questionnaire was designed for self-administration and is scored by adding each of the 8 items:

Question 1-7 are scored on a 0-4 scale
Question 8 is scored 0,2, or 4

Score: _____

Scores of 8 or more indicate hazardous cannabis use, while scores of 12 or more indicate a possible cannabis use disorder for which further intervention may be required.

Adamson S.J, Kay-Lambkin F.J, Baker A.L, Lewin T.J, Thornton L, Kelly B.J, and Sellman J.D. (2010). An Improved Brief Measure of Cannabis Misuse: The Cannabis Use Disorders Identification Test – Revised (CUDIT-R). *Drug and Alcohol Dependence* 110:137-143.

Source: Washington Recovery Helpline

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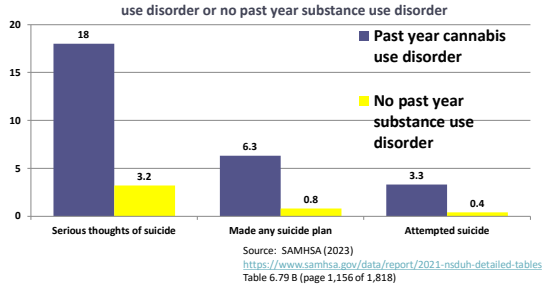

Source: SAMHSA (2023)
https://www.samhsa.gov/data/report/2021-nsduh-detailed-tables
Table 6.79 B (page 1,156 of 1,818)

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Considering motives for use that could exacerbate (or cause) unwanted symptoms

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The relationship of substance use to sleep quality (and subsequent unwanted outcomes)

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Sleep, Sleepiness, and Alcohol Use

Timothy Roehrs, Ph.D., and Thomas Roth, Ph.D.

The study of alcohol's effects on sleep dates back to the late 1930s. Since then, an extensive literature has described alcohol's effects on the sleep of healthy, nonalcoholic people. For example, studies found that in nonalcoholics who occasionally use alcohol, both high and low doses of alcohol initially improve sleep, although high alcohol doses can result in sleep disturbances during the second half of the nocturnal sleep period. Furthermore, people can rapidly develop tolerance to the sedative effects of alcohol. Researchers have investigated the interactive effects of alcohol with other determinants of daytime sleepiness. Such studies indicate that alcohol interacts with sleep deprivation and sleep restriction to exacerbate daytime sleepiness and alcohol-induced performance impairments. Alcohol's effects on other physiological functions during sleep have yet to be documented thoroughly and unequivocally.

Key words: sleep disorder; physiological ACDF (effects of alcohol or other drug use, abuse, and dependence); REM (rapid eye movement) sleep; NREM (nonrapid eye movement) sleep; circadian rhythm; melatonin; prolactin; body temperature; attention; time of day; insomnia;

http://pubs.niaaa.nih.gov/publications/arh25-2/101-109.pdf

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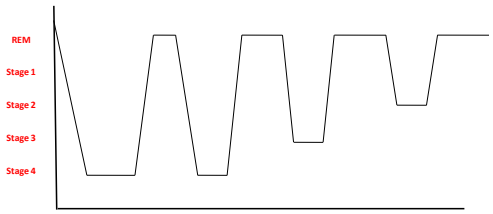

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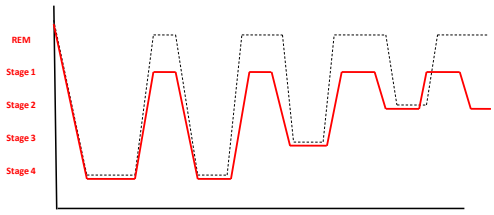

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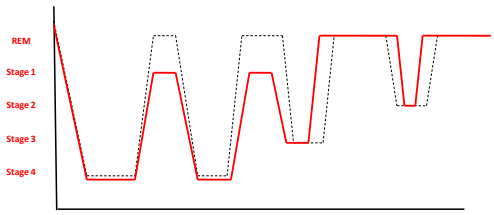

Next day, increase in:
•Daytime sleepiness
•Anxiety
•Irritability
•Jumpiness

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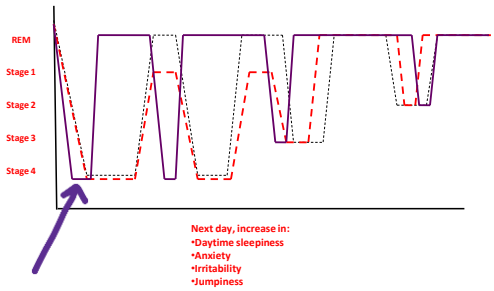

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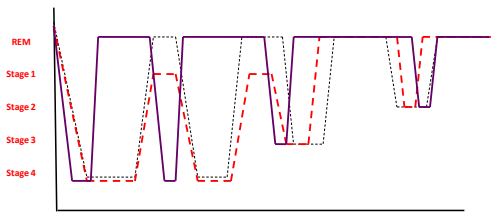

Next day, increase in:
•Daytime sleepiness
•Anxiety
•Irritability
•Jumpiness
Next day, feel:
•Fatigue

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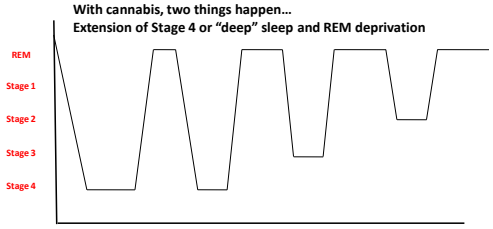
With cannabis, two things happen…
Extension of Stage 4 or "deep" sleep and REM deprivation



Angarita, G.A., Emadi, N., Hodges, S., & Morgan, P.T. (2016). Sleep abnormalities associated with alcohol, cannabis, cocaine, and opiate use: A comprehensive review. *Addiction Science & Clinical Practice, 11:* 9.

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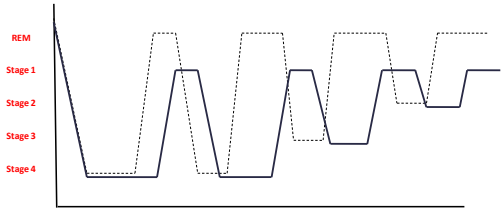

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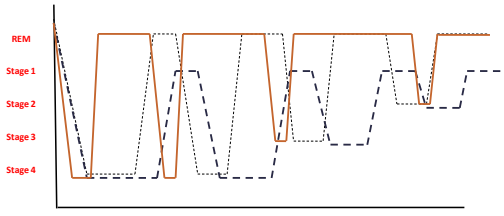

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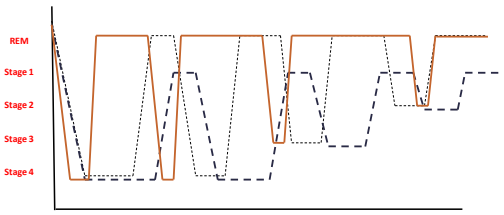

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- Daytime sleepiness
- Anxiety
- Irritability
- Jumpiness

Next day, feel:
- Fatigue

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The relationship of substance use to attention, concentration, and memory

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Cannabis and cognitive abilities

- **Effects on the brain**
  - Hippocampus
    - Attention, concentration, and memory
  - Research with college students shows impact on these even 24 hours after last use (Pope & Yurgelun-Todd, 1996)
  - After daily use, takes 28 days for impact on attention, concentration, and memory to go away (Pope, et al., 2001)
  - Hanson et al. (2010):
    - Deficits in verbal learning (takes 2 weeks to improve)
    - Deficits in verbal working memory (takes 3 weeks to improve)
    - Deficits in attention (still present at 3 weeks)

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A closer look at cannabis

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CANNABIS USE – onset

- **Many routes/means of use:**
  - Smoked (joints, bongs, pipes)
  - Vaped (vaporizer)
  - Ingested orally (brewed as a tea, food, edibles)
  - Concentrates (dabbing, hash oil, budder, shatter)
- **When smoked/vaped…**
  - Effects begin immediately
- **When consumed in food or drink…**
  - Effects begin 30-60 minutes

NIDA (2019)

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Cannabis is really potent, and the science is showing that matters…

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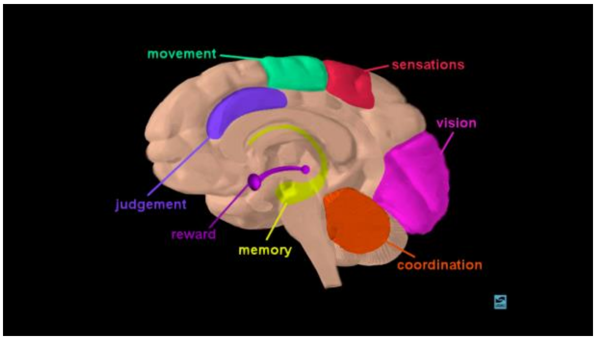

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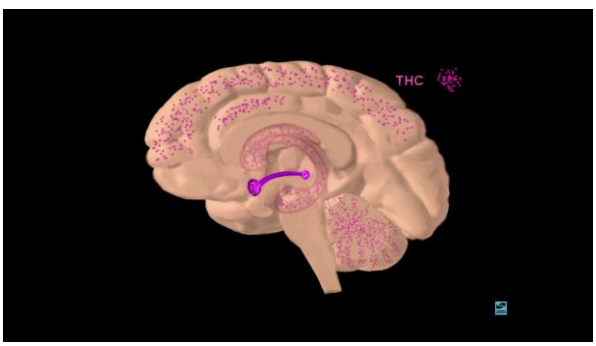

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frontiers in PSYCHOLOGY

REVIEW ARTICLE

Neuroscientific model of motivational process

"The anterior cingulate cortex (attention area) and the dorsolateral prefrontal cortex (cognitive control area) are the main neural circuits related to regulation of motivation."

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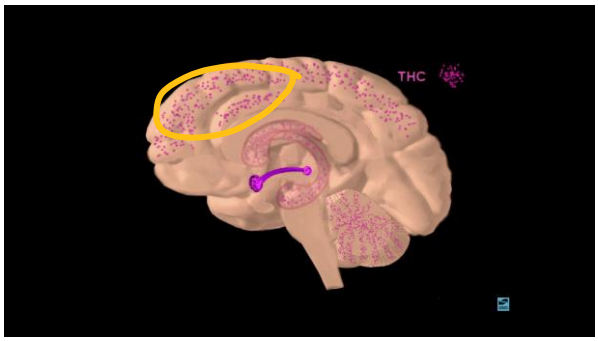

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What do researchers and scientists consider "high potency" cannabis?

Anything over 10% THC

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ElSohly, M.A., Mehmedic, Z., Foster, S., Gon, C., Chandra, S., & Church, J.C. (2016). Changes in cannabis potency over the last 2 decades (1995-2014) – Analysis of current data in the United States. *Biol Psychiatry, 79,* 613-619.


Archival Report

Changes in Cannabis Potency Over the Last 2 Decades (1995–2014): Analysis of Current Data in the United States

Mahmoud A. ElSohly, Zlatko Mehmedic, Susan Foster, Chandrani Gon, Suman Chandra, and James C. Church

ABSTRACT

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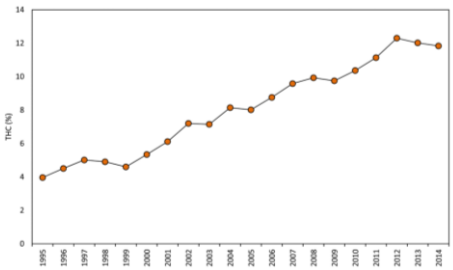

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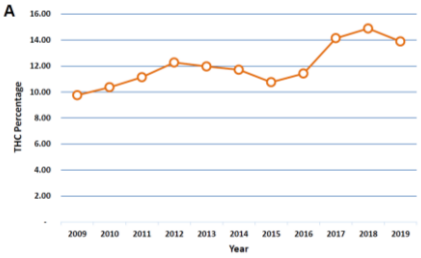

ElSohly, M.A., Chandra, S., Radwan, M., Majumdar, C.G., Church, J.C. (2021). A comprehensive revie of cannabis potency in the United states in the last decade. *Biological Psychiatry: Cognitive Neuroscience, and Neuroimaging, 6,* 603-606.

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ADDICTION

SSA

RESEARCH REPORT

Variation in cannabis potency and prices in a newly legal market: evidence from 30 million cannabis sales in Washington state

Rosanna Smart[1], Jonathan P. Caulkins[1,2], Beau Kilmer[1], Steven Davenport[1] & Greg Midgette[1]

ABSTRACT

Aims To (1) assess trends and variation in the market share of product types and potency sold in a legal cannabis retail market and (2) estimate how potency and purchase quantity influence price variation for cannabis flower.
Design Secondary analysis of publicly available data from Washington State's cannabis traceability system spanning 7 July 2014 to 30 September 2016. Descriptive statistics and linear regressions assessed variation and trends in cannabis

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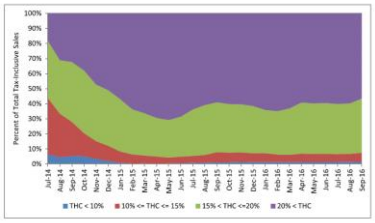

Figure 3 Market shares for cannabis flower products sold, by delta-9-tetrahydrocannabinol (THC) % category. Market share is calculated as a percent of total cannabis flower expenditures (excise-tax-inclusive). [Colour figure can be viewed at wileyonlinelibrary.com]

Smart, R., Caulkins, J.P., Kilmer, B., Davenport, S., & Midgette, G. (2017). Variation in cannabis potency and prices in anewly legal market: Evidence from 30 million cannabis sales in Washington state. *Addiction, 112,* 2167-2177.

58

Cash, M.C., Cunnane, K., Fan, C., Romero-Sandoval, E.A. (2020). Mapping cannabis potency in medical and recreational programs in the United States. *PLoS ONE 15*(3): e0230167. https://doi.org/10.1371/journal.pone.0230167


PLOS ONE

RESEARCH ARTICLE

Mapping cannabis potency in medical and recreational programs in the United States

Mary Catherine Cash[1☯], Katharine Cunnane[2☯], Chuyin Fan[1], E. Alfonso Romero-Sandoval[2]*

1 The University of North Carolina Eshelman School of Pharmacy, Chapel Hill, NC, United States of America, 2 Department of Anesthesiology, Wake Forest University School of Medicine, Winston-Salem, NC, United States of America

☯ These authors contributed equally to this work.
* eromero.sandoval@gmail.com

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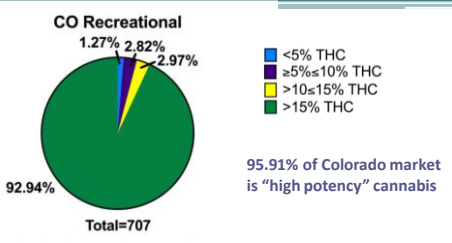
OPEN ACCESS

Abstract

Cannabis related online searches are associated with positive attitudes toward medical cannabis, particularly when information is obtained from dispensaries. Since pain is the main reason for medicinal cannabis use, information from dispensary websites has the potential to shape the attitude of pain patients towards cannabis. This is relevant because cannabis

59



95.91% of Colorado market is "high potency" cannabis

Cash, M.C., Cunnane, K., Fan, C., Romero-Sandoval, E.A. (2020). Mapping cannabis potency in medical and recreational programs in the United States. *PLoS ONE 15*(3): e0230167. https://doi.org/10.1371/journal.pone.0230167

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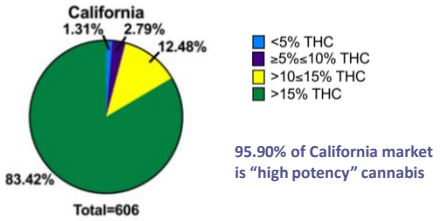

95.90% of California market is "high potency" cannabis

Cash, M.C., Cunnane, K., Fan, C., Romero-Sandoval, E.A. (2020). Mapping cannabis potency in medical and recreational programs in the United States. *PLoS ONE 15*(3): e0230167. https://doi.org/10.1371/journal.pone.0230167

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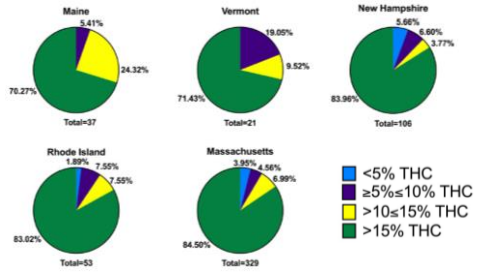
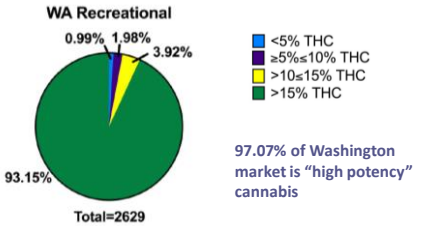


Cash, M.C., Cunnane, K., Fan, C., Romero-Sandoval, E.A. (2020). Mapping cannabis potency in medical and recreational programs in the United States. *PLoS ONE 15*(3): e0230167. https://doi.org/10.1371/journal.pone.0230167

62



97.07% of Washington market is "high potency" cannabis

Cash, M.C., Cunnane, K., Fan, C., Romero-Sandoval, E.A. (2020). Mapping cannabis potency in medical and recreational programs in the United States. *PLoS ONE 15*(3): e0230167. https://doi.org/10.1371/journal.pone.0230167

63

Why potency matters

64

DiForti, M., Quattrone, D., Freeman, T.P., Tripoli, G., et al. (2019). The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): A multicenter case-control study. *Lancet Psychiatry, 6* (5), 426-436.


Articles

Increased risk of psychosis

The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): a multicentre case-control study

65

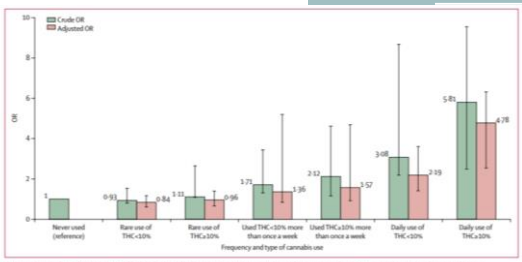


Figure 1: Crude and fully adjusted ORs of psychotic disorders for the combined measure of frequency plus type of cannabis use in the whole sample
Crude ORs are adjusted only for age, gender and ethnicity and fully adjusted ORs are additionally adjusted for level of education, employment status, and use of tobacco, stimulants, ketamine, legal highs, and hallucinogenics. Error bars represent 95% CIs. OR=odds ratio.

DiForti, et al. (2019)

66

Conclusions

- 20% of new cases of psychotic disorder "could have been prevented if daily use of cannabis had been abolished (page 433)"
- If high-potency cannabis were no longer available, 12.2% of cases of first-episode psychosis could be prevented
- Numbers for Amsterdam?
  - **50.3% of cases attributed to high potency cannabis**

DiForti, et al. (2019)

67

JAMA Psychiatry | Original Investigation

Association of High-Potency Cannabis Use With Mental Health and Substance Use in Adolescence

Increased risk of addiction and generalized anxiety disorder

Hines, L.A., Freeman, T.P, Gage, S.H., Zammit, S., Hickman,M., Cannon, M., Munafo, M., MacLeod, J., & Heron, J. (2020). Association of high-potency cannabis use with mental health and substance use in adolescence. *JAMA Psychiatry, 77*, 1044-1051. doi: 10.1001/jamapsychiatry.2020.1035.

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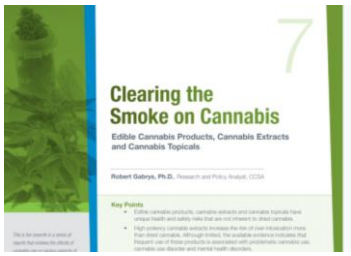
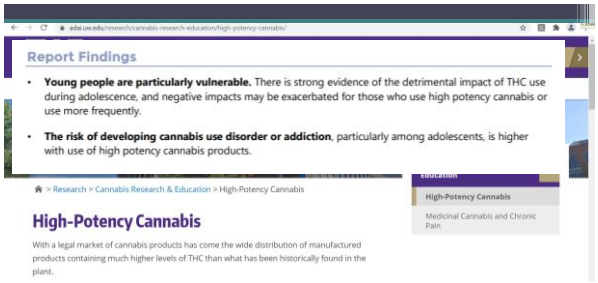


For concentrates/ extracts, more association with "problematic cannabis use, cannabis use disorder, and mental health disorders." -- Gabrys (2020)

Gabrys, R. (2020). *Clearing the Smoke on Cannabis: Edible Cannabis Products, Cannabis Extracts and Cannabis Topicals.* Canadian Centre on Substance Use and Addiction.

69



https://adai.uw.edu/cerp/high-potency-cannabis/

70

We need to be mindful of individuals who may be struggling with anxiety, depressed mood, sleep difficulties, and other issues, particularly if they're declining referrals for counseling/health and say they want to use cannabis for medical purposes instead

71

Doctors should think twice before prescribing medical marijuana: guideline Source: CTVNews.com

New guideline warns pain benefits of medical cannabis overstated
University of Alberta led guideline warns health risks may outweigh benefits, provides guidance on when (and when not to) prescribe.
Source: ScienceDaily.com

Canadian Doctors Warn Medical Pot Is Overhyped Source: Gizmodo.com

72

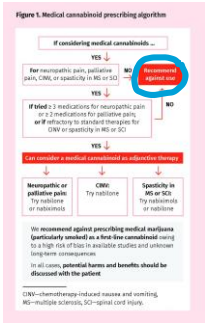
Allan, G.M., Ramji, J., Perry, D., Ton, J., Beahm, N.P., Crisp, N., Dockrill, B., Dublin, R.E., Findlay, T., Kirkwood, J., Fleming, M., Makus, K., Zhu, X., Korownyk, C., Kolber, M., McCormack, J., Nickel, S., Guillermina, N., & Lindblad, A.J. (2018). Simplified guidelines for prescribing medical cannabinoids in primary care. *Canadian Family Physician, 64,* 111-120.


CFP·MFC

The official journal of the College of Family Physicians of Canada

Simplified guideline for prescribing medical cannabinoids in primary care

73



Only are recommending for neuropathic pain, palliative and end-of-life pain, chemotherapy-induced nausea and vomiting, and spasticity due to multiple sclerosis or spinal cord injury…

AND

If tried traditional therapies/treatments first…

Allan, et al. (2018)

74


Cannabis and Cannabinoid Research

ORIGINAL RESEARCH Open Access

Cannabidiol Does Not Dampen Responses to Emotional Stimuli in Healthy Adults

"This study suggests that oral CBD does not alter responses to emotional stimuli, or produce anxiolytic-like effects in healthy human subjects. (p. 112)"

Arndt & de Wit (2017)

75

JAMA Network Open.

Original Investigation | Psychiatry

Effect of Medical Marijuana Card Ownership on Pain, Insomnia, and Affective Disorder Symptoms in Adults

A Randomized Clinical Trial

Abstract

IMPORTANCE Despite the legalization and widespread use of cannabis products for a variety of medical concerns in the US, there is not yet a strong clinical literature to support such use. The risks and benefits of obtaining a medical marijuana card for common clinical outcomes are largely unknown.

OBJECTIVE To evaluate the effect of obtaining a medical marijuana card on target clinical and cannabis use disorder (CUD) symptoms in adults with a chief concern of chronic pain, insomnia, or anxiety or depressive symptoms.

DESIGN, SETTING, AND PARTICIPANTS This pragmatic, single-site, single-blind randomized clinical trial was conducted in the Greater Boston area from July 1, 2017, to July 31, 2020. Participants

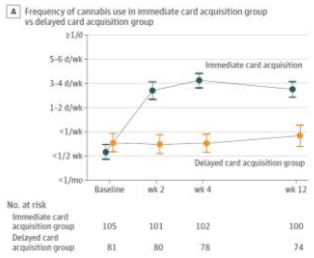
Key Points

Question What are the risks and benefits of obtaining a medical marijuana card for adults who seek medical marijuana for pain, insomnia, and anxiety or depressive symptoms?

Findings In this randomized clinical trial involving 185 participants, immediate acquisition of a medical marijuana card increased the incidence and severity of cannabis use disorder (CUD) and resulted in no significant improvement

Gilman, et al. (2022) (released 3/18/2022)

76



Gilman, et al. (2022) (released 3/18/2022)

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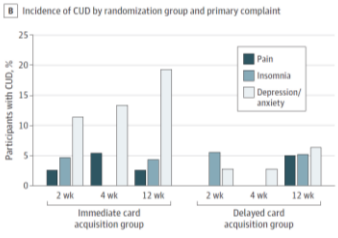
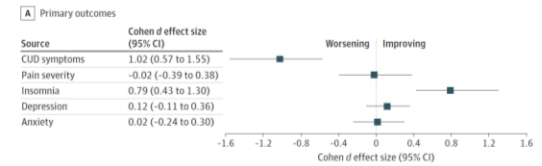


Gilman, et al. (2022) (released 3/18/2022)

78

Figure 3. Effect Sizes for Primary, Secondary, and Exploratory Outcomes



"There were no observed benefits of obtaining a medical marijuana card for pain, anxiety, or depressive symptoms. (p. 11)"

Gilman, et al. (2022) (released 3/18/2022)

79

- Those with affective disorders have 3.9 higher odds of meeting criteria for Cannabis Use Disorder
- "These data suggest that a medical marijuana card may pose a high risk or may even be contraindicated for people with affective disorders. This finding is important to replicate because depression has been reported as the third most common reason that people seek a medical marijuana card." (page 10)

Gilman, et al. (2022) (released 3/18/2022)

80

Separating reported medical use from management of withdrawal

81

Motivations for Use

	Motive Category	Proportion of participants endorsing motive	Proportion of primary motives
Enjoyment/fun	Enjoyment/fun (e.g., be happy, get high, enjoy feeling)	52.14%	24.03%
	Conformity (e.g., peer pressure, friends do it)	42.81%	16.40%
	Experimentation (e.g., new experience, curiosity)	41.25%	29.36%
Social enhancement	Social enhancement (e.g., bonding with friends, hang out)	25.71%	8.66%
Boredom	Boredom (e.g., something to do, nothing better to do)	25.08%	4.18%
	Relaxation (e.g., to relax, helps me sleep)	24.64%	6.97%
	Coping (e.g., depressed, relieve stress)	18.14%	5.10%
	Availability (e.g., easy to get, it was offered)	13.74%	2.23%
	Relative low risk (e.g., low health risk, no hangover)	10.88%	0.95%
Altered perception	Altered perception or perspectives (e.g., to enhance experiences, makes things more fun)	10.58%	1.81%
Activity enhancement	Activity enhancement (e.g., music sounds better, every day activities more interesting)	5.68%	0.80%
	Rebellion (e.g., rebelling against parents, thrill of something illegal)	5.21%	0.32%
	Alcohol intoxication (e.g., I was drunk)	4.42%	0.47%
	Food enhancement (e.g., enjoy good food, food tastes better)	3.79%	0.00%
	Anxiety reduction (e.g., be less shy, feel less insecure)	3.31%	0.00%
Image enhancement	Image enhancement (e.g., to be cool, to feel cool)	2.85%	0.32%
Celebration	Celebration (e.g., special occasion, to celebrate)	1.26%	0.16%
	Medical use (e.g., alleviate physical pain, have a headache)	1.26%	0.16%
	Habit (e.g., feeling was addictive, became a habit)	0.95%	0.00%

Lee, Neighbors & Woods (2007)

82

Motivations for Use

	Motive Category	Proportion of participants endorsing motive	Proportion of primary motives
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Relaxation (includes helping w/sleep)	Boredom (e.g., something to do, nothing better to do)	25.08%	4.18%
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	Habit (e.g., feeling was addictive, became a habit)	0.95%	0.00%

Lee, Neighbors & Woods (2007)

83

Withdrawal: Cannabis

Diagnostic Criteria **292.0 (F12.288)**

A. Cessation of cannabis use that has been heavy and prolonged (i.e., usually daily or almost daily use over a period of at least a few months).

B. Three (or more) of the following signs and symptoms develop within approximately 1 week after Criterion A:

1. Irritability, anger, or aggression.
2. Nervousness or anxiety.
3. Sleep difficulty (e.g., insomnia, disturbing dreams).
4. Decreased appetite or weight loss.
5. Restlessness.
6. Depressed mood.
7. At least one of the following physical symptoms causing significant discomfort: abdominal pain, shakiness/tremors, sweating, fever, chills, or headache.

C. The signs or symptoms in Criterion B cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

D. The signs or symptoms are not attributable to another medical condition and are not better explained by another mental disorder, including intoxication or withdrawal from another substance.

84

What's the good news?

85

Therapy works!

Counseling works!

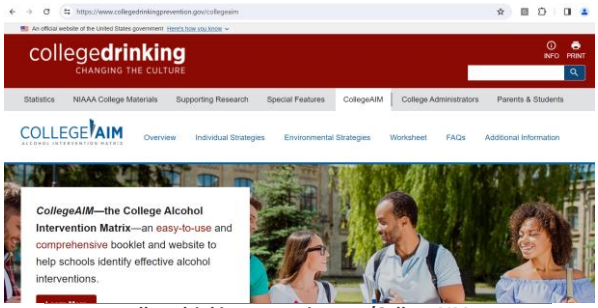
We have treatments that work!

Recovery support works!

86

We need to get our students to these resources, offices, and services

87



www.collegedrinkingprevention.gov/CollegeAIM

88

"Consider a mix of strategies.

Your best chance for creating a safer campus could come from a combination of individual- and environmental-level interventions that work together to maximize positive effects (p. 5)."

89

This "mix" includes (but is not limited to):

- Policies
- Enforcement
- Education
- Prevention
- Intervention
- Treatment
- Recovery support

90

Implementation strategies are key

"…the use of effective interventions on a scale sufficient to benefit society requires careful attention to implementation strategies as well. One without the other is like serum without a syringe; the cure is available, but the delivery system is not." (p. 448)

Fixsen, D. L., Blase, K. A., Duda, M. A., Naoom, S. F., & Van Dyke, M. (2010). Implementation of evidence-based treatments for children and adolescents: Research findings and their implications for the future. In J. R. Weisz & A. E. Kazdin (Eds.), *Evidence-based psychotherapies for children and adolescents* (p. 435–450). The Guilford Press

91

There are people who could benefit from services who might not be getting them

- **72% of college students who screened positive for major depression felt they needed help**
- **Only 36% of students received medication or therapy of any kind**

Source: Eisenberg, et al., (2007)

92

Depression

- **Factors related to not accessing services:**
  - **Unaware of or unfamiliar with service options**
  - **Questioned helpfulness of therapy or medication**
  - **Uncertainty about insurance coverage for mental health visits**
  - **Less use by students who reported growing up in "poor family"**
  - **Less use by those identifying as Asian or Pacific Islander**

Source: Eisenberg, et al., (2007)

93

Depression

- Factors related to not accessing services:
  - Reasons identified by students:
    - Lack of perceived need
    - Belief that stress is normal
    - Lack of time

Source: Eisenberg, et al., (2007)

94

Need for service vs. access

- 26% of young adults said they needed mental health services but didn't receive them within the past 12 months
  - Among young adults with depressive symptoms:
    - 43% said they needed mental health services but didn't receive them within the past 12 months
    - 40% received mental health services (similar to the 36% cited by Eisenberg 12 years earlier)

Cadigan, Lee, & Larimer, 2019

95

Identifying and Reducing Barriers to Accessing Care

Cadigan, Lee, & Larimer, 2019

96

5 suggestions (that you can do with as you wish)

97

(1) Consider screening for a range of issues

98

Can Screen For…

- **Depression**
- **Alcohol use disorder**
- **Cannabis use disorder**
- **Other substance use**
- **Body image issues**
- **Interpersonal Violence**
- **Connectedness/support**

99

(2) Go a step further with SBIRT, especially since motivational enhancement-based brief interventions show success

100

- **S**creening: Universal screening for quickly assessing use/severity/risks
- **B**rief **I**ntervention: Motivational/awareness-raising intervention to prompt contemplation of or commitment to change
- **R**eferral to **T**reatment: Referral to specialty care or follow-ups

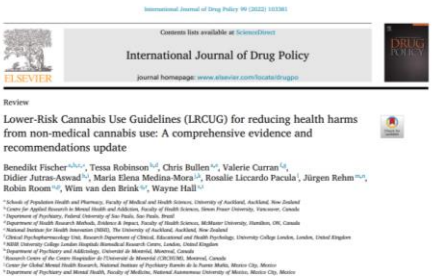
101

(3) Do what you can to increase the chance that people can get connected to services and overcome barriers

102

(4) Be aware of "lower risk" guidelines that might suggest outright abstinence in the context of mental health history

103



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Contents lists available at ScienceDirect

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journal homepage: www.elsevier.com/locate/drugpo

Review

Lower-Risk Cannabis Use Guidelines (LRCUG) for reducing health harms from non-medical cannabis use: A comprehensive evidence and recommendations update

Benedikt Fischer[a,b,c,*], Tessa Robinson[b,d], Chris Bullen[b,e], Valerie Curran[f,g], Didier Jutras-Aswad[h,i], Maria Elena Medina-Mora[j,k], Rosalie Liccardo Pacula[l], Jürgen Rehm[m,n], Robin Room[o,p], Wim van den Brink[q], Wayne Hall[r]

Published in January 2022 issue of International Journal of Drug Policy

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General Precaution A:

"There is no universally safe level of cannabis use; thus, the only reliable way to avoid any risk for harm from using cannabis is to abstain from its use."

105

Among other recommendations:

- People who use cannabis should use low potency cannabis products
- "Overall, there is no categorically 'safe' route of use for cannabis and each route option brings some level of distinct risks that needs to be taken into account for use. " That said, smoking is particularly risky.
- Keep use occasional (no more than 1 or 2 days a week, weekend only)
- If a person notices impacts to attention, concentration, or memory, "consider temporarily suspending or substantially reducing the intensity (e.g., frequency/potency) of their cannabis use."
- Avoid driving while under the influence (waiting at least 6-8 hours after inhaling, 8-12 hours after use of edibles)

106

Recommendation #11: ***Some specific groups of people are at elevated risk for cannabis use-related health problems because of biological pre-dispositions or co-morbidities. They should accordingly (and possibly on medical advice as required) avoid or adjust their cannabis use.*** Higher risks for harm extend to individuals with a genetic predisposition (e.g., a first-degree family or personal history) for, or an active psychosis, mood (e.g., depressive) disorder, or substance use disorder.

107

(5) Realize how what we do is tied into the mission of our campuses

108

Relationship Between Alcohol Use and Academic Success

- Relationship between alcohol, sleepiness, and GPA exists in college (Singleton & Wolfson, 2009)
- Heavy drinking associated with lower GPA, and students at research universities who report heavy episodic drinking (5 drinks in a row for males, 4 drinks in a row for females) are less likely to be engaged in interactions with faculty (Porter & Prior, 2007)
- Frequency of binge drinking associated with lower grades in college setting (Pascarella, et al., 2007)

109

Relationship Between Cannabis Use and Academic Success

- More frequent cannabis use associated with lower GPA, skipping more classes, less current enrollment, and being less likely to graduate on time (Arria, et al., 2013, 2015; Suerken, et al., 2016)

Arria, A.M., Caldeira, K.M., Bugbee, B.A., Vincent, K.B., O'Grady, K.E. (2015). The academic consequences of marijuana use during college. *Psychology of Addictive Behaviors, 29,* 564-575.
Arria, A.M., Caldeira, K.M., Vincent, K.B., Winick, E.R., Baron, R.A., O'Grady, K.E. (2013). Discontinuous college enrollment: Associations with substance use and mental health. *Psychiatric Services, 64,* 165-172.
Suerken, C.K., Reboussin, B.A., Egan, K.L., Sutfin, E.L., Wagoner, K.G., Spangler, J. & Wolfson, M. (2016). Marijuana use trajectories and academic outcomes among college students. *Drug and Alcohol Dependence, 162,* 137-145.

110

Relationship Between Cannabis Use, Alcohol Use, and Academic Success

- Alcohol and cannabis are both associated with lower GPA; when entered in same regression, effects of alcohol became non-significant (Bolin, Pate, McClintock, 2017)
- Students using both cannabis and alcohol at moderate to high levels have significantly lower GPAs over two years (Meda, et al., 2017)
  - Students who moderate or curtail substance use improved GPA (Meda, et al., 2017)

111

Wrapping up

112

If there's a limited budget for prevention, invest in evidence-based strategies

113

www.collegedrinkingprevention.gov/CollegeAIM

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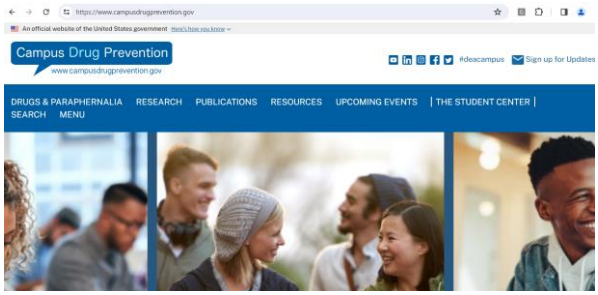
https://www.campusdrugprevention.gov/



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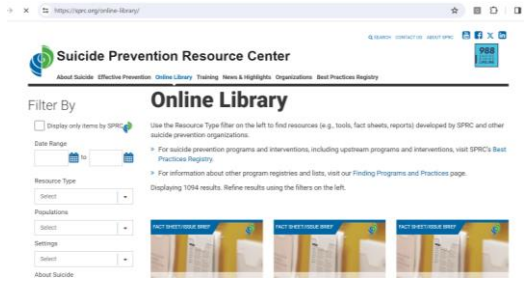
Suicide Prevention Resource Center Best Practices Registry
http://www.sprc.org/online-library



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Guide to Community Preventive Services
http://www.thecommunityguide.org

117

SAMHSA's Evidence-Based Practices Resource Center
https://www.samhsa.gov/resource-search/ebp

118

Then, implement them with fidelity

119

And when people don't seem on board with prevention?

Tell the story differently.

120

Show how what you do in one domain pays dividends elsewhere.

Transform the narrative to make clear why prevention matters.

121

Because sometimes we just need to tell a story in more than one way to get people on board…

122

Because sometimes we just need to tell a story in more than one way to get people on board… And you have that ability…

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https://www.depts.ttu.edu/hs/csa/docs/1.pdf

Center for the Study of Addiction and Recovery, Texas Tech University (2005)

"By ensuring their enrollment in the university, the Collegiate Recovery Community estimates retaining $430,500.00 annually in direct tuition revenue that could potentially be lost due to relapse and subsequent dropout. (p.6)"

REMEMBER

Students with alcohol/drug problems face a greater risk of drop-out due to personal, financial, family, and legal problems. At Texas Tech University (TTU), the Center for the Study of Addiction and Recovery supports 80 of the estimated 213 addicted students seeking help on the TTU campus. By ensuring their enrollment in the university, the Collegiate Recovery Community estimates retaining $430,500.00 annually in direct tuition revenue that could potentially be lost due to relapse and subsequent drop-out.

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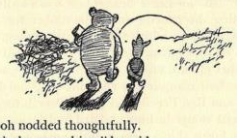
So, when in doubt, transform the narrative

125

"When you wake up in the morning, Pooh," said Piglet at last, "what's the first thing you say to yourself?"

"What's for breakfast?" said Pooh. "What do *you* say, Piglet?"

"I say, I wonder what's going to happen exciting *today*?" said Piglet.



Pooh nodded thoughtfully.

"It's the same thing," he said.

Milne (1926)

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Jason Kilmer – jkilmer@uw.edu

@cshrb_uw

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