Alcohol Use Disorder in the time of Covid-19: Challenges for AA.

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Scope of the Problem:
By the Numbers

Alcohol		Opioids	
Past-year use	**179,144,000**	**Past-year misuse**	**10,810,000**
% of population	65.1%	% of population	4%
AUD	**14,504,000**	**OUD**	**2,060,000**
% of population	5.3%	% of population	0.8%
ED visits	**1,714,757** *Primary reason*	**ED visits**	**408,079** *Primary reason*
	4,936,690 *All alcohol-related*		**1,461,770** *All opioid-related*
Deaths	**95,158** *Annual deaths*	**Deaths**	**46,802** *2018 overdose deaths*
	44,080 *Acute (e.g., injury)*		**31,533** *Synthetic opioids*
	51,078 *Chronic (e.g., liver disease)*		**14,996** *Heroin*
			14,975 *Rx Opioids*

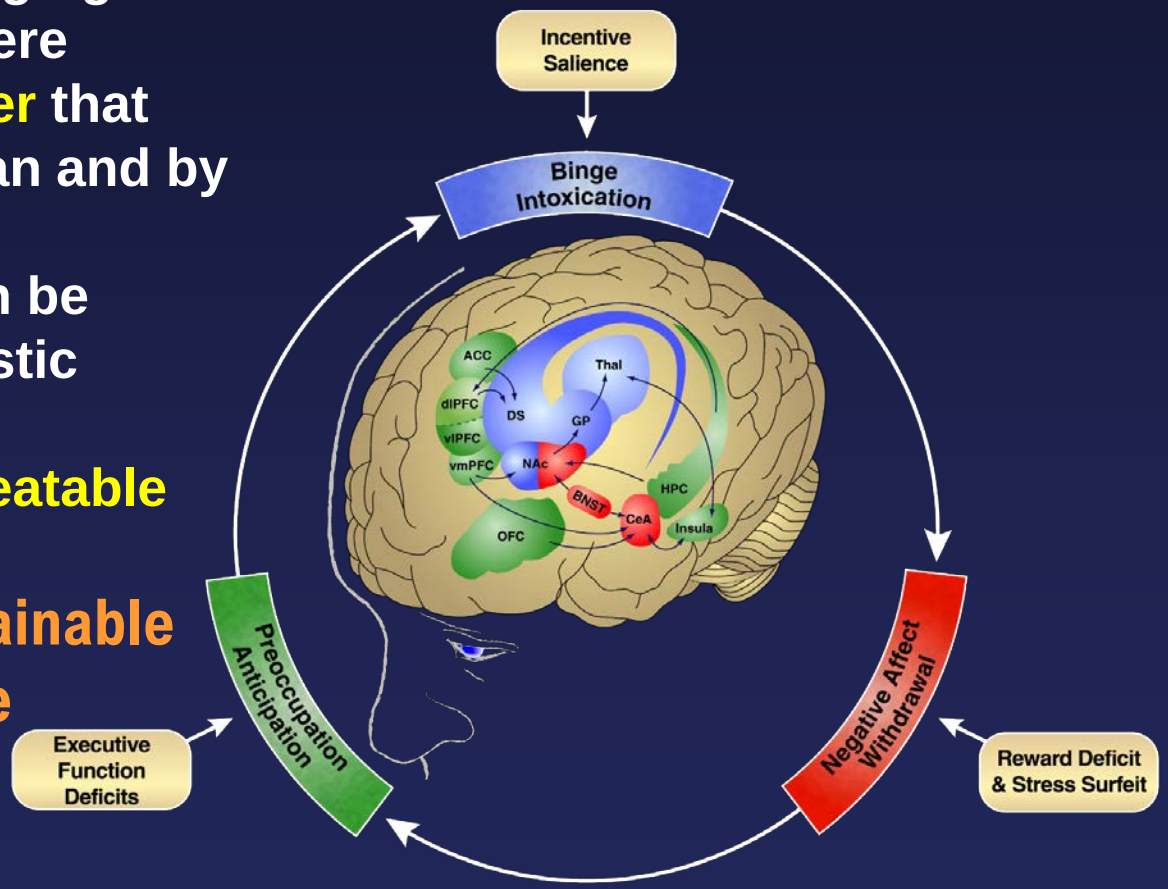
Data sources: 2019 NSDUH, Nationwide Emergency Department Sample, 2018 CDC Overdose Death Data, 2011-2015 CDC Alcohol Related Death Inventory

Alcohol Use Disorder: Conceptual Advances Over the Past 50 Years

Alcohol Use Disorder is…

- a **spectrum disorder** ranging from mild to moderate to severe
- a **developmental disorder** that varies across the lifespan and by individual
- a **brain disorder** that can be studied through a heuristic framework
- both **preventable** and **treatable**

Recovery from AUD is attainable but often includes relapse as part of the process.



Adapted from: Koob, GF and Volkow ND, 2010. Neuropsychopharmacology Reviews 35: 217- 238; George O, Koob GF., 2013 Proc Natl Acad Sci USA, 110:4165-4166

50 Years of Advancing Alcohol Research

- Epidemiological research has enabled us to track progress and challenges associated with alcohol misuse in the United States
- Advances in understanding the genetics of AUD have implications for prevention and precision medicine
- Research has established that the adolescent brain is uniquely vulnerable to the effects of alcohol; longitudinal studies that assess predictors and consequences of adolescent alcohol consumption continue to inform prevention and treatment strategies
- Understanding the role of stress neurobiology in alcohol misuse has implications for risk and recovery from AUD

50 Years of Advancing Alcohol Research

- There is a menu of effective behavioral therapies for treatment of AUD,
- There are currently 3 FDA approved effective medications for treatment of AUD
- Recognized by researchers in the 1970s, Fetal Alcohol Spectrum Disorders (FASD) has been a long-standing research priority for NIAAA
- As alcohol-associated liver disease contributes to increasing alcohol-related mortality, treatment remains an unmet clinical need

Current Challenges and Priorities

Alcohol and co-occurring conditions

- **Mental health conditions** – alcohol misuse often precedes diagnoses in an effort to cope with symptoms; each condition exacerbates the other
- **Pain** – acute alcohol at binge levels may reduce pain, but chronic alcohol and withdrawal increase pain sensitivity
- **Disrupted sleep** – persistent sleep problems during abstinence promote relapse and are a major impediment for recovery from alcohol use disorder

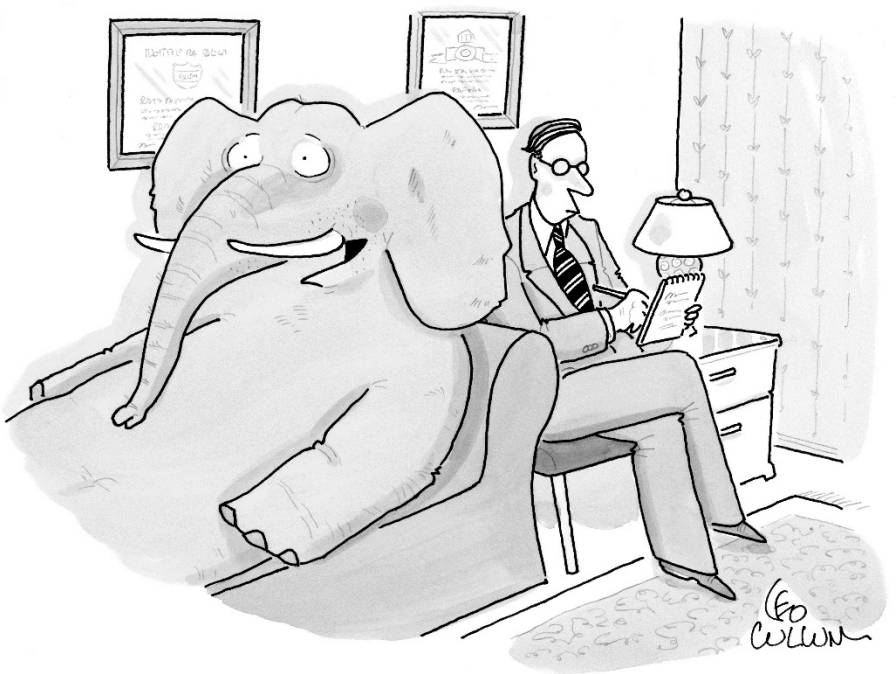
Emerging trends in alcohol use in the population

- **Alcohol use among women** – Gender gaps are narrowing for prevalence, early onset drinking, frequency and intensity of drinking, having AUD, and many negative consequences of alcohol misuse
- **Increasing alcohol use among senior adults (65+)** – 1 in 10 engage in binge drinking

Alcohol and Mental Health – The Elephant in the Room

Alcohol misuse correlates with poor mental health

- Often precedes diagnoses of mental health conditions
- Commonly used in an effort to cope with symptoms
- In the end it makes the prognoses worse
- Similarly, mental health conditions complicate treatment for AUD



"I'm right there in the room, and no one even acknowledges me."

CartoonStock.com

"I'm right here in the room and no one even acknowledges me"

Sources:

Centanni, S. W., Bedse, G. , Patel, S. and Winder, D. G. (2019), Driving the Downward Spiral: Alcohol-Induced Dysregulation of Extended Amygdala Circuits and Negative Affect. Alcohol Clin Exp Res 43:2000-2013

Mäkelä P, Raitasalo K, Wahlbeck K (2015) Mental health and alcohol use: a cross-sectional study of the Finnish general population, European Journal of Public Health, 25, 2, 225–231;

Markou A, Kosten TR, Koob GF (1998) Neurobiological Similarities in Depression and Drug Dependence: A Self-Medication Hypothesis. Neuropsychopharmacology 18, 135–174.

Current Challenges and Priorities

Closing the treatment gap

- In the US, fewer than 10% of people with AUD receive any form of treatment
- Routine health care presents a unique opportunity for prevention, early intervention, and treatment of AUD
- However, many health care providers:
  - Do not perform alcohol screening
  - Are not aware of evidence-based treatments
  - Do not know where to refer patients for treatment

Goals:

Improve physician training in substance misuse prevention and treatment at all levels

and

Integrate prevention, early intervention, and treatment into routine health care

Priority: Closing the Treatment Gap

In Development: Clinician's Core Resource

Modules include:

- Presentation in primary care
- Role in common co-occurring conditions
- Neuroscience
- Diagnostic criteria, recommended drinking limits
- Evidence-based therapies/medications
- Addressing stigma
- Interactions with commonly used medications

Supporting Research on Recovery from AUD

For consistency across recovery research studies, NIAAA engaged stakeholders to develop a consensus research definition of recovery:

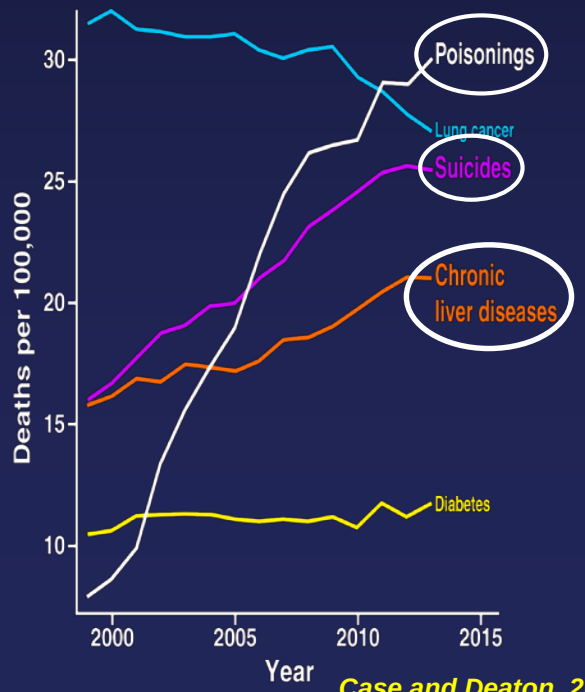
- The proposed definition describes **recovery as a process through which an individual pursues both remission from AUD and cessation of heavy drinking**
- For more information, visit https://www.niaaa.nih.gov/division-treatment-recovery-research

Alcohol as a Coping Response:
Hyperkatifeia, Deaths of Despair, and COVID-19

Alcohol-Related Deaths in the United States

- Alcohol-related deaths **doubled** from 1999 to 2017 (White et al., 2020)
  - Death rates were highest among men and middle-aged and older adults (45-74)
  - Death rates increased over time across all age groups except 16-20 and 75+
  - Increase in death rate over time was greater in women than men
- These statistics align with other recent reports that have highlighted changing trends in drinking patterns and increased consequences of alcohol in **women** and the **aging population**
- Alcohol plays a prominent role in **"deaths of despair"**, contributing to:
  - 15-20% of all drug overdoses
  - 26% of suicides
  - 50% of liver disease deaths
- Deaths of despair contribute to the **decreasing life expectancy** in the U.S. observed since 2014 (Woolf et al., 2019)
- These patterns of increased mortality have also been **observed across many racial/ethnic groups and age groups** (Woolf et al., 2018)

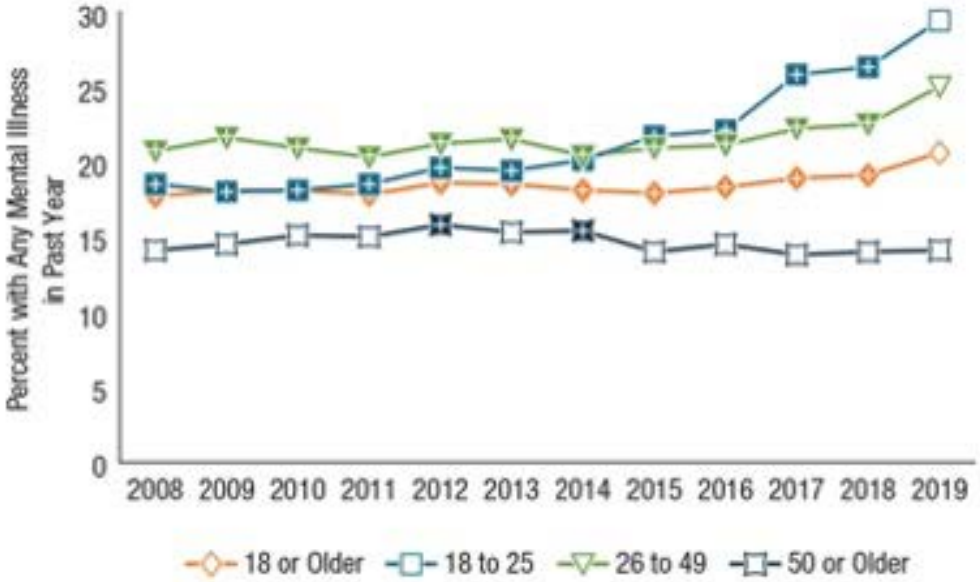
Mortality by cause among White non-Hispanics (age 45-54)



Case and Deaton, 2015

FFR1.52

Any Mental Illness in the Past Year among Adults Aged 18 or Older: 2008-2019



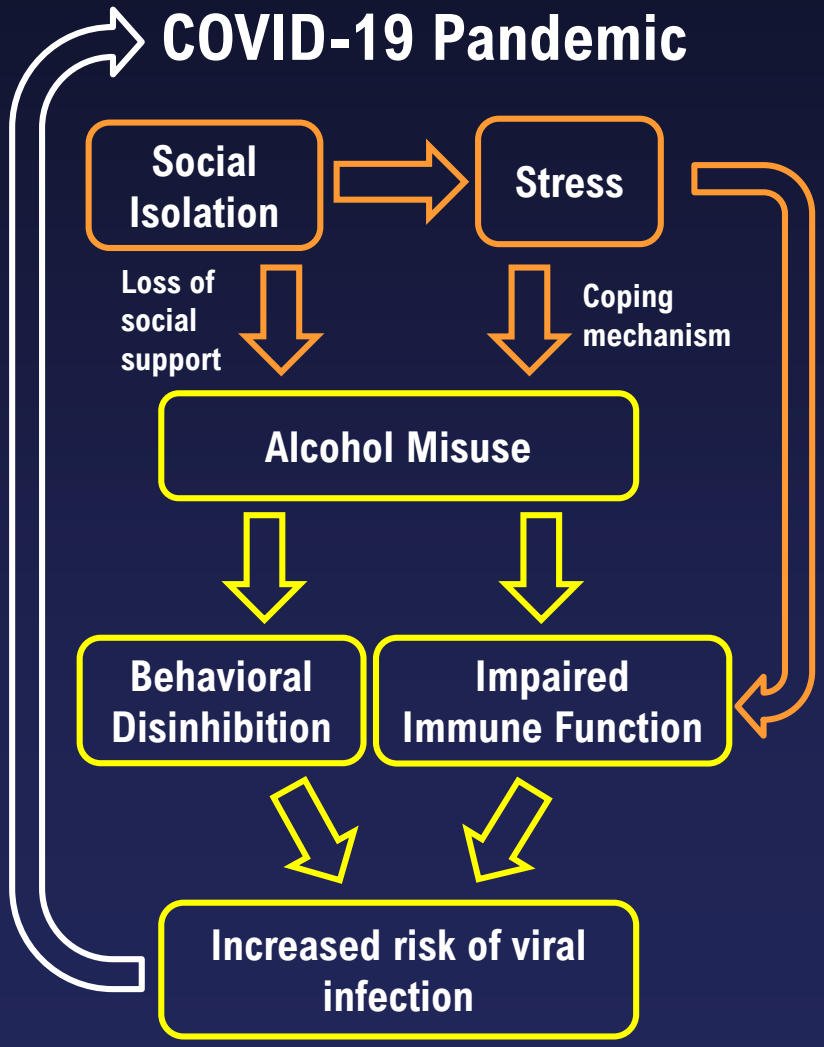
Age	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
18 or Older	17.7+	18.1+	18.1+	17.8+	18.6+	18.5+	18.1+	17.9+	18.3+	18.9+	19.1+	20.6
18 to 25	18.5+	18.0+	18.1+	18.5+	19.6+	19.4+	20.1+	21.7+	22.1+	25.8+	26.3+	29.4
26 to 49	20.7+	21.6+	20.9+	20.3+	21.2+	21.5+	20.4+	20.9+	21.1+	22.2+	22.5+	25.0
50 or Older	14.1	14.5	15.1	15.0	15.8+	15.3	15.4+	14.0	14.5	13.8	14.0	14.1

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

SAMHSA
Substance Abuse and Mental Health Services Administration

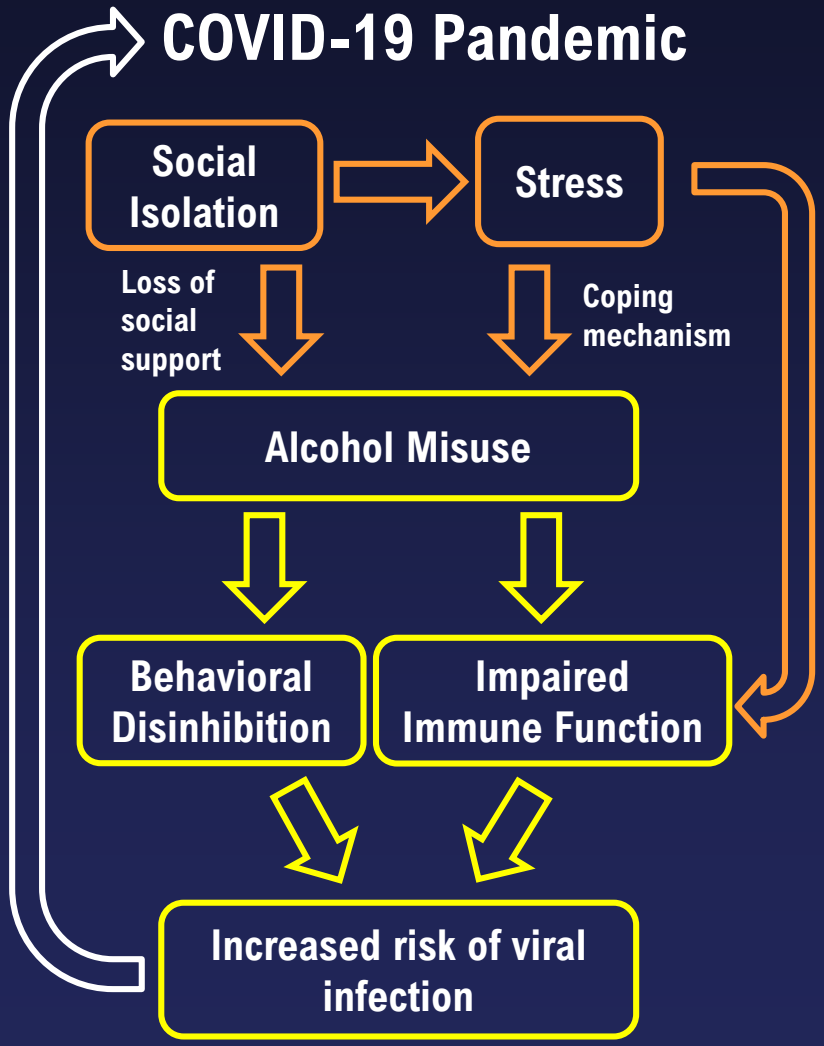
Alcohol and the COVID-19 Pandemic: A Bidirectional Relationship

- Isolation and stress associated with the pandemic could lead to increased alcohol misuse:
  - Physical distancing can lead to social isolation or loss of social support, which can lead to stress or precipitate relapse for those in recovery.
  - Physical distancing also poses challenges for treatment and recovery. Telehealth and virtual meetings can be helpful options for individuals seeking treatment or in recovery from AUD.



Alcohol and the COVID-19 Pandemic: A Bidirectional Relationship

- **Biological and behavioral effects of alcohol misuse could also exacerbate the pandemic:**
  - Alcohol produces behavioral disinhibition that may promote risky behavior and less compliance with guidelines to reduce the spread of the virus.
  - Alcohol compromises immune function, increasing the risk and severity of lung infections.



Drinking to Cope During the COVID-19 Pandemic

- Surveys of consumers in the US and elsewhere suggest that some people are drinking more while others are drinking less
- For those who may be consuming more alcohol, limited data suggest that stress is a contributing factor. For instance:
  - Alcohol use increased among college students in March particularly among those reporting higher levels of stress and anxiety *(Lechner et. al. 2020)*
  - People who said their psychological well-being was impacted negatively by the pandemic also reported more drinking days and more drinks per occasion *(Rodriguez et. al. 2020)*
  - An Australian survey found that 20% of people reported drinking more during the pandemic and about half endorsed stress, anxiety, boredom, or worry about COVID-19 as reasons for drinking more *(Biddle et. al. 2020)*
- Such findings are concerning given that drinking to cope places a person on a slippery slope to AUD
- In addition, increases in consumption can increase the risk of injuries at a time when many hospitals are inundated with sick patients

Systematic Review: Alcoholics Anonymous and Other 12-Step Programs for Alcohol Use Disorder

A systematic review examined outcomes of over 10,000 participants from 27 studies that compared peer-led Alcoholics Anonymous (AA) or professionally delivered Twelve-Step Facilitation (TSF) with other behavioral interventions such as motivational enhancement therapy or cognitive-behavioral therapy, TSF treatment variants, or no treatment.

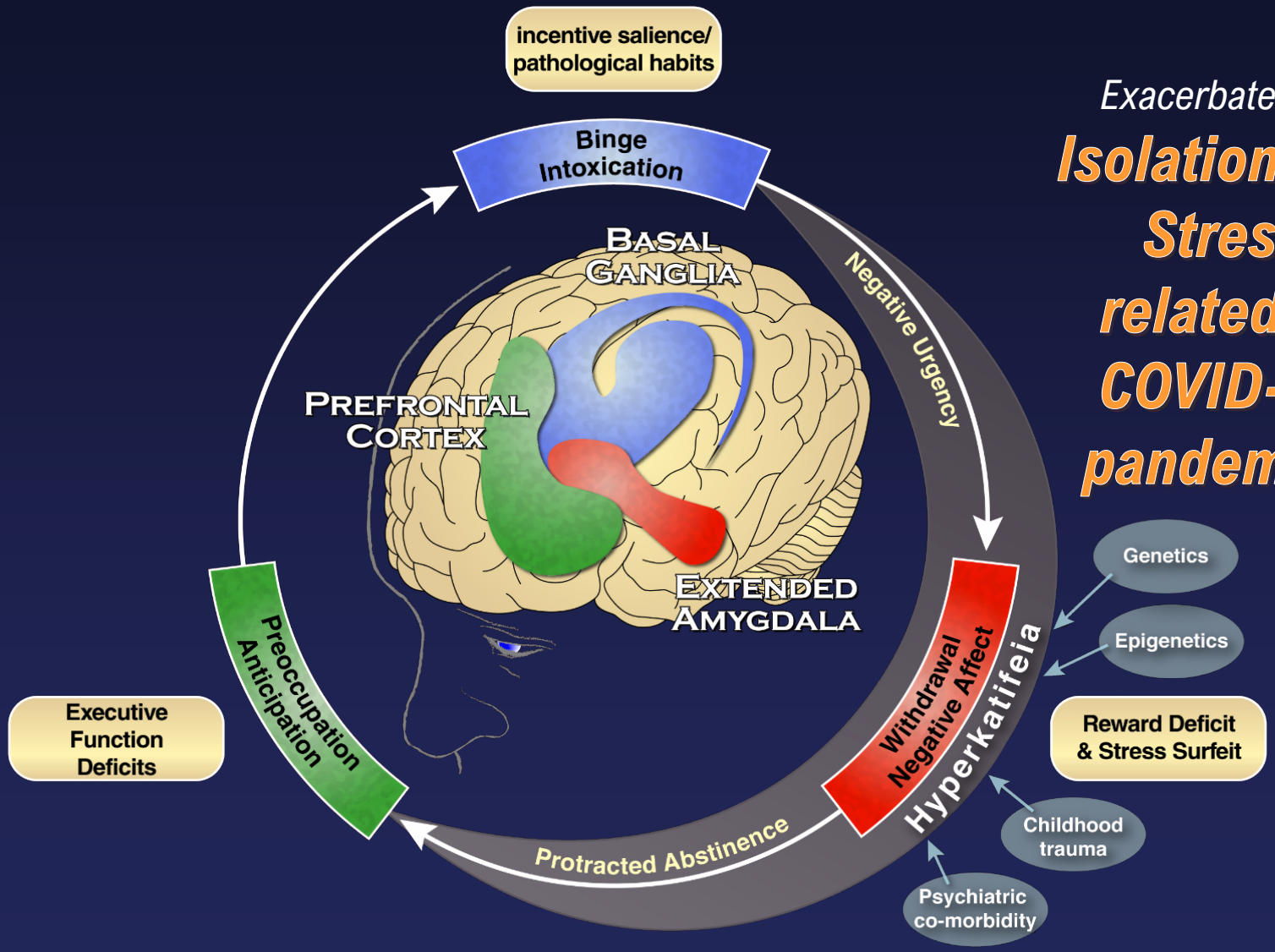
Across a variety of measures, AA performed at least as well as other behavioral treatments for AUD, and AA was more effective in increasing abstinence. These results suggest that AA and TSF can offer a low-cost, effective treatment option for maintaining abstinence among those with AUD.

Comparison of AA/TSF to other behavioral interventions

Outcomes		Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	Nº of participants (studies)	Certainty of the evidence (GRADE)
		Risk with other clinical interventions	Risk with AA/TSF			
Abstinence	Proportion of participants (%) completely abstinent Follow-up: 12 months	Study population 345 per 1000	418 per 1000 (356 to 490)	RR 1.21 (1.03 to 1.42)	1936 (2 RCTs)	⊕⊕⊕⊕ High
	PDA Follow-up: 12 months	The mean PDA in the comparison group ranged from 62.3% to 84.0%	MD 3.03 higher (4.36 lower to 10.43 higher)	-	1999 (4 RCTs)	⊕⊝⊝⊝ Very low [a, b, c]
	LPA Follow-up: 6 months	The mean LPA in the comparison group ranged from 0.47 to 1.71 months	MD 0.60 higher (0.30 lower to 1.50 higher)	-	136 (2 RCTs)	⊕⊕⊝⊝ Low [d, e]
Drinking Intensity	Drinks per drinking day Follow-up: 12 months	The mean DDD in the comparison group ranged from 4.66 to 5.38	MD 0.17 lower (1.11 lower to 0.77 higher)	-	1516 (1 RCT)	⊕⊕⊕⊝ Moderate [c]
	PDHD Follow-up: 12 months	The mean PDHD in the comparison group was 13.4%	MD 5.51 lower (14.15 lower to 3.13 higher)	-	91 (1 RCT)	⊕⊕⊝⊝ Low [f]
Alcohol-related consequences (assessed with DrInC) Follow-up: 12 months		The mean DrInC in the comparison group ranged from 21.8% to 72.9%	MD 2.88 lower (6.81 lower to 1.04 higher)	-	1762 (3 RCT)	⊕⊕⊕⊝ Moderate [c]
Alcohol addiction severity (assessed with ASI) Follow-up: 12 months		One study found an advantage for the AA/TSF intervention relative to the comparison intervention in the slope for improvement over a 12-month follow-up period (Brooks 2003), as measured by the ASI alcohol composite score (P < 0.05).			112 (1 quasi-RCT)	⊕⊕⊝⊝ Low [a, g]

Citation: Kelly J, Humphreys K, and Ferri M. *Cochrane Database Syst Rev*. 3(3) CD012880 2020 Mar 11.

Addiction as a Coping Response: Hyperkatifeia, Deaths of Despair, and COVID 19



Exacerbated by

Isolation and Stress related to COVID-19 pandemic?

From: Koob, GF, Powell, P., and White, A. Addiction as a Coping Response: Hyperkatifeia, Deaths of Despair, and COVID-19 American Journal Psychiatry, 177 (2020) 1031-1037

Allostatic Change in Emotional State Associated with Transition to AUD

Homeostasis

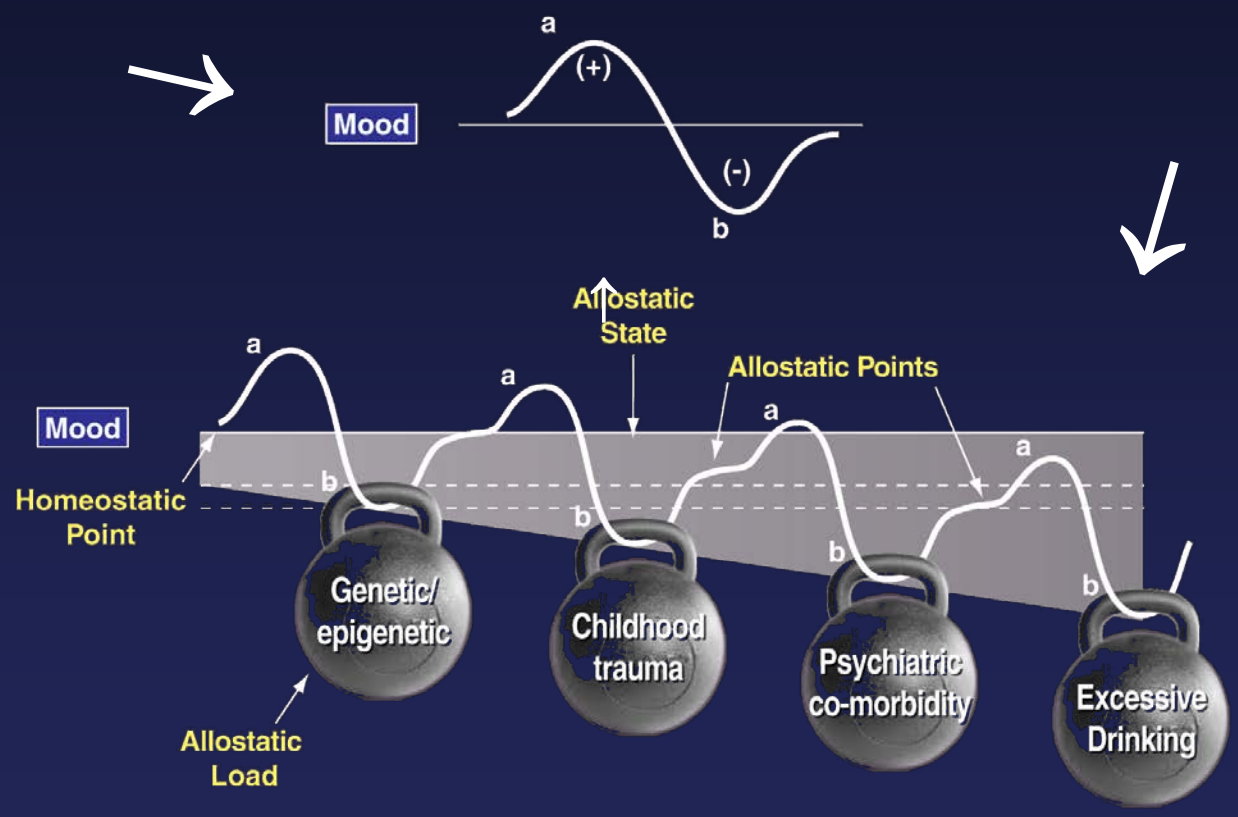
physiologic equilibrium

normal set point

stable

wide dynamic range

no pathology



Allostasis

compensated equilibrium

abnormal set point

inherently unstable

restricted range

leads to pathology

From:

Sterling P and Eyer J, Allostasis: a new paradigm to explain arousal pathology. In Fisher S and Reason J (eds), Handbook of Life Stress, Cognition and Health, John Wiley, New York, 1988, pp. 629-647

Koob GF and Le Moal M, Neuropsychopharmacology, 2001, 24:97-129.

NIAAA Commitment to Supporting a Diverse Research Community and Research on Health Disparities

- Health disparities highlighted by the COVID-19 pandemic and recent instances of social injustice among African-Americans are a call to action for NIH and the entire scientific community
- NIAAA recognizes that diverse research teams broaden the scope of scientific inquiry, bring creative solutions to bear on complex scientific problems, and encourage research relevant to the health care needs of under-served populations
- To eliminate health disparities and diversify the scientific workforce, NIAAA is committed to:
  - Significantly increasing diversity and fully embracing inclusion in the scientific workforce
  - Eliminating disparities in funding among grantees from underrepresented groups
  - Expanding health disparities research
  - Ensuring that our research and outreach benefits underserved communities

Challenges for AA- Pandemic and Post-Pandemic

"Rigorous reviews of the research on the mechanisms of behavior change through which AA enhances recovery have found that AA typically confers benefits by mobilizing multiple therapeutic factors simultaneously—mostly through facilitating adaptive changes in the social networks of participants, but also by boosting members' recovery coping skills, recovery motivation, abstinence self-efficacy and psychological well-being and by reducing impulsivity and craving." - John Kelly et al (2020)

- **Lack of direct social interaction produces unique challenges across the board for treatment of those struggling with AUD**
- **Meetings are a cornerstone of AA. Can on-line AA meetings provide the same social support as in-person meetings? How important is the physical and social context?**
- **Diversity issues are and will remain a challenge in alcohol treatment availability, stigma, research and public health during the pandemic and post-pandemic. How do online meetings impact diversity?**

Help Us Share Our Message:
NIAAA Resources for Prevention and Treatment of Alcohol-Related Problems

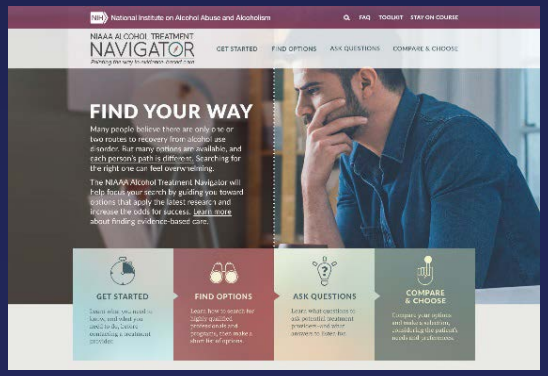
Youth Screening Guide

Rethinking Drinking

Screening and early intervention → **Preventive Intervention** → **Self-Assesment** → **Treatment**

CollegeAIM

Treatment Navigator



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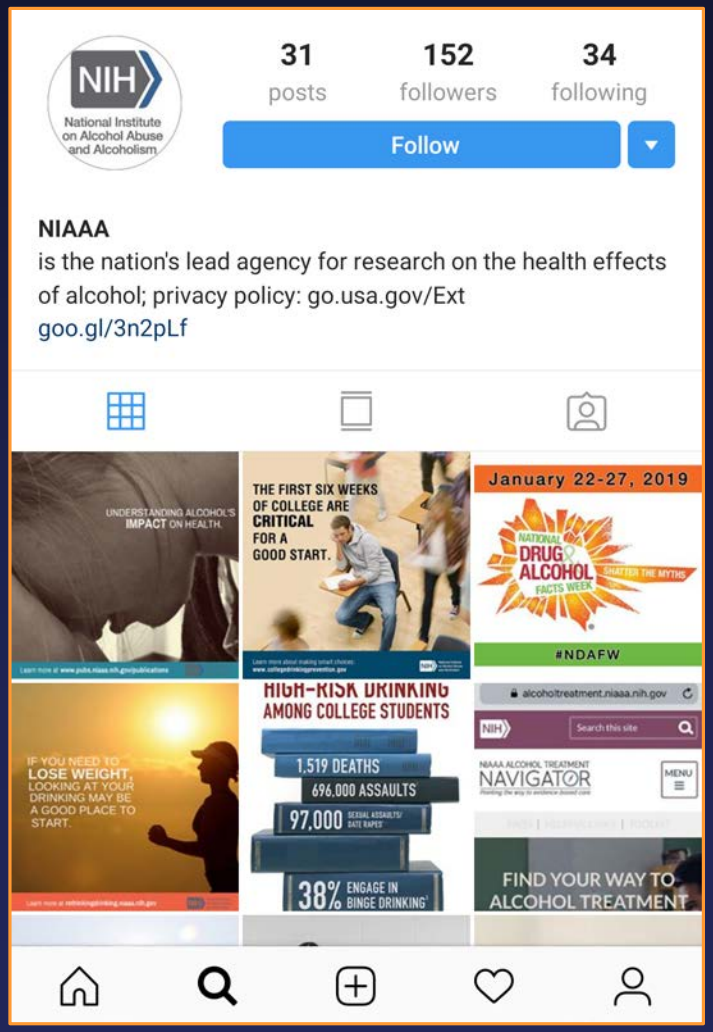

NIAAA

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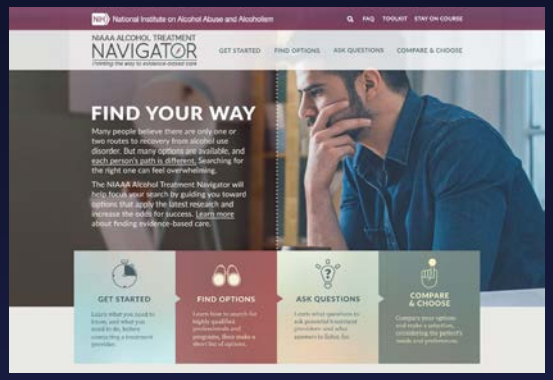

Thank You

Special thanks to
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