

Disulfiram: An Effective Yet Underutilized Drug for AUD

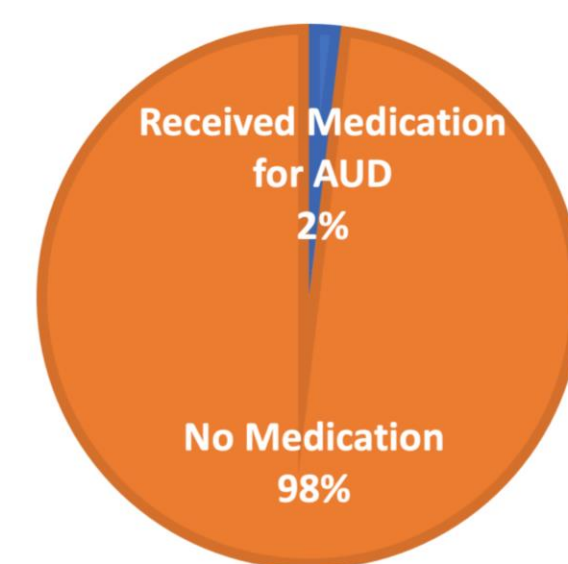
Jasmin Shores, MD, MPH, Kumar Felipe Vasudevan, MD, MS
UCLA Department of Addiction Medicine,
UCLA Department of Internal Medicine



BACKGROUND & INTRODUCTION

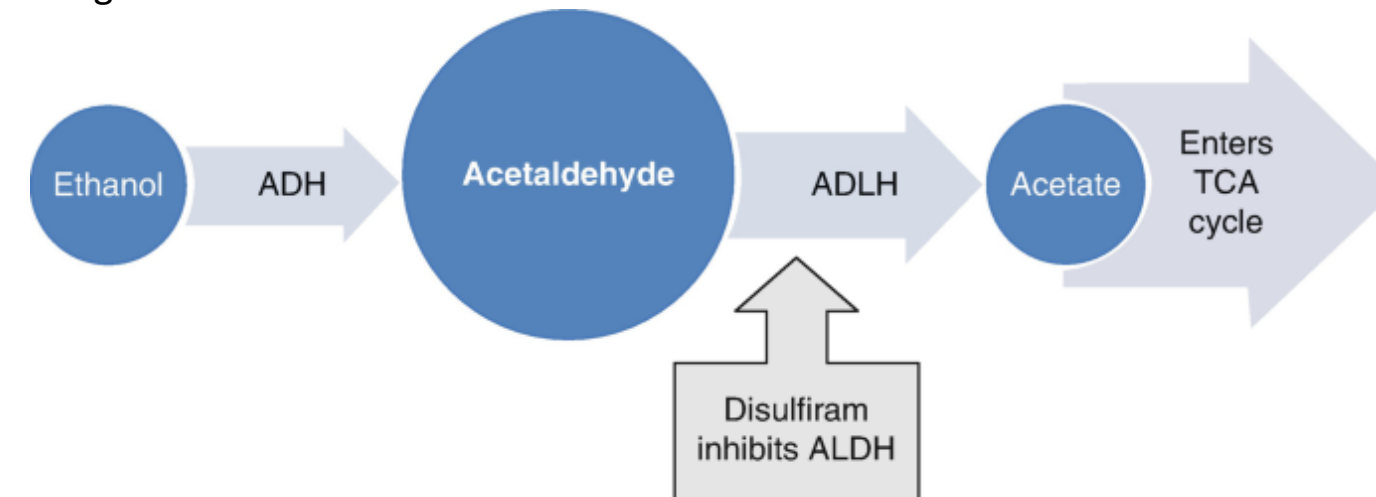
- In the US, 1 in 10 people over age 12 met criteria for alcohol use disorder (AUD) in 2023, yet few received treatment.¹
- Three FDA-approved medications exist for AUD, however they remain vastly underutilized.^{2,3,4}

FIGURE 1. PEOPLE AGES 12+ WITH AUD IN 2023¹



- Disulfiram is an FDA-approved medication rarely considered first-line therapy compared to others.^{3,5} Many providers find the alcohol reaction unacceptable.

Figure 2. Disulfiram Mechanism of Action⁶



- There are cases where disulfiram use is relatively safe, effective and preferred by patients.⁵
- One meta-analysis of 22 randomized control trials found disulfiram more effective than acamprosate, naltrexone or no disulfiram in affecting abstinence.⁵

CASE DESCRIPTION

Meet Patient A:

- 38-year-old female with history of severe AUD, tobacco use and depression, recently seen at the UCLA Addiction Medicine Clinic.

History:

- She began drinking heavily at age 26, drinking 1 box of wine over 2 days at a time.
- She also endorsed intermittent tobacco use (~1/2 pack per day).
- She was seen by multiple psychiatrists in the past. Prior AUD treatment included naltrexone, topiramate and treatment of comorbid depression.
- She continued to drink heavily. As a result, she was unable to work effectively in her job in tech & design and had to move in with her parents.

Treatment Course:

- During an initial visit to UCLA Addiction Clinic in Spring 2023, she had concerns over alcohol use and motivation to stop drinking. She started disulfiram and monthly naltrexone injections.
- She initially drank ~1-2 glasses of wine at a time and had mild nausea with disulfiram. Disulfiram use and drinking habits varied.
- In Summer 2023, she had a long hospital stay for Guillain Barre Syndrome, requiring a long course of physical rehab.
- After this, she decided to remain abstinent. She restarted disulfiram and naltrexone injections. She was able to avoid alcohol.
- After 9 months of abstinence, she chose to stop naltrexone injections. This was because her alcohol cravings were under control and she had difficulty making monthly visits for the injection.
- She remained on disulfiram, which she felt encouraged her to avoid alcohol in stressful moments.
- She has had intermittent smoking use related to the stresses of dating, however she continues to abstain from alcohol.
- As of now, she has not had alcohol in over one year.

Discussion

What contributed to success with disulfiram?

- Patient A had strong motivation to avoid drinking
- No contraindications existed to using this medication
- Patient A understood and accepted the effects of disulfiram when mixed with alcohol
- Patient A used knowledge of possible effects to increase her motivation to avoid alcohol
- Compared to other FDA-approved AUD medications, Patient A found disulfiram to be more convenient, desirable and effective

What can we do as providers?

- Evaluate for any of our own potential biases regarding disulfiram use and how this may contribute to disparities in AUD treatment
- Increase discussion about disulfiram as a first line option for AUD that can be relatively safe and effective in the right clinical context
- Directly involve patients in decisions on medication therapies, as it aligns with their understanding, preferences and overall goals

Authors & Disclosures

Author 1: Jasmin Shores, MD, MPH; UCLA Internal Medicine-Preventative Medicine Residency, Nothing to disclose
Author 2: Kumar Felipe Vasudevan, MD, MS; UCLA Addiction Medicine Program, Nothing to disclose

References

1. Alcohol treatment in the United States. (2025) National Institute on Alcohol Abuse and Alcoholism. <https://www.niaaa.nih.gov/alcohol-effects-health/alcohol-topics-z/alcohol-facts-and-statistics/alcohol-treatment-united-states>
2. Kennedy-Hendricks, A., et al. (2024). Clinician prescribing practices involving medications for alcohol use disorder. *American Journal of Preventive Medicine*. <https://doi.org/10.1016/j.amepre.2024.11.006>
3. Huskamp, H. A., et al. (2020). Medication utilization for alcohol use disorder in a commercially insured population. *Journal of General Internal Medicine*, 35(11), 3262–3270. <https://doi.org/10.1007/s11606-020-06073-w>
4. Peters, Z. J., et al. (2021). Rates of prescription orders for United States active duty service members diagnosed with alcohol use disorder. *Substance Abuse*, 42(4), 638–645. <https://doi.org/10.1080/08897077.2020.1809604>
5. Skinner, M. D., et al. (2014). Disulfiram efficacy in the treatment of alcohol dependence: A meta-analysis. *PLoS ONE*, 9(2). <https://doi.org/10.1371/journal.pone.0087366>
6. Sousa, A. D. (1970, January 1). *Disulfiram: Pharmacology and mechanism of action*. SpringerLink. https://link.springer.com/chapter/10.1007/978-981-32-9876-7_2