An Internist's Guide to Unhealthy Alcohol Use

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Disclosures

- None

Learning Objectives

- Understand the terminology used to describe unhealthy alcohol use
- Identify means of screening for alcohol use disorder
- Describe the utility of brief primary care-based interventions for unhealthy alcohol use
- Achieve familiarity with FDA-approved medications for alcohol use disorder

Patient DM

- 58 year old man with hypertension, depression, and bilateral hearing loss s/p bilateral cochlear implants

- Drinks 24-48oz beer daily, often drinks after walking dogs in the morning
- Niece reports he is drinking substantially more
- Denies any legal, social, work, or medical consequences of his alcohol use

Patient RW

- 43 year old man with hypertension, chronic hepatitis C recently treated with cure, anxiety, and opioid use disorder on Suboxone maintenance

- History of heavy alcohol (72oz beer/day) use since late teens with up to 90 days of sobriety in the past without specific treatment
- Previous legal (DUI) and employment issues related to his alcohol use
- Has tried to quit cold turkey but gets tremors

Outline

- Epidemiology
- Language and terminology
- Screening
- Treatment

Epidemiology

- 138M (52%) individuals ≥ 12 years old have used alcohol in the past month
- > 88K alcohol-related deaths annually
- Responsible for 1 in 10 deaths of adults aged 20-64
- 3rd leading cause of preventable death
- $249B in costs in 2010

SAMHSA, NSDUH 2015.
Centers for Disease Control and Prevention. ARDI, 2013.
Stahre M, et al. Prev Chron Dis 2014.

Language and Terminology

- Unhealthy alcohol use
  - Risky use
    - Men < 65 - ≥ 14 standard drinks/week on average or ≥ 4 drinks on any day
    - Women, and men ≥ 65 - ≥ 7 standard drinks/week on average or ≥ 3 drinks on any day
  - Alcohol use disorder – a **pattern** of alcohol use leading to **clinically significant impairment or distress**, as manifested by multiple psychosocial, behavioral, or psychologic features

Saitz R. NEJM 2005.
Jonas DE, et al. Ann Int Med 2012.

What Is a Standard Drink?

12 fl oz of regular beer	=	8–9 fl oz of malt liquor (shown in a 12 oz glass)	=	5 fl oz of table wine	=	1.5 fl oz shot of distilled spirits (gin, rum, tequila, vodka, whiskey, etc.)
						
about 5% alcohol		about 7% alcohol		about 12% alcohol		about 40% alcohol

Each beverage portrayed above represents one standard drink of "pure" alcohol, defined in the United States as 0.6 fl oz or 14 grams. The percent of pure alcohol, expressed here as alcohol by volume (alc/vol), varies within and across beverage types. Although the standard drink amounts are helpful for following health guidelines, they may not reflect customary serving sizes.

NIAAA.

Alcohol Use Disorder – DSM-5 Criteria

- Alcohol used in larger amounts or over a longer period of time than intended
- Persistent desire or unsuccessful attempts to cut down or control alcohol use
- Significant time spent obtaining, using, and recovering from the effects of alcohol
- Craving to use alcohol
- Recurrent alcohol use leading to failure to fulfill major role obligations at work, school, or home
- Recurrent use of alcohol, despite having persistent or recurring social or interpersonal problems caused or worsened by alcohol
- Recurrent alcohol use despite having persistent or recurring physical or psychological problems caused or worsened by alcohol
- Giving up or missing important social, occupational, or recreational activities due to alcohol use
- Recurrent alcohol use in hazardous situations
- Tolerance
- Withdrawal

Mild: 2-3 symptoms
Moderate: 4-5 symptoms
Severe: 6+ symptoms

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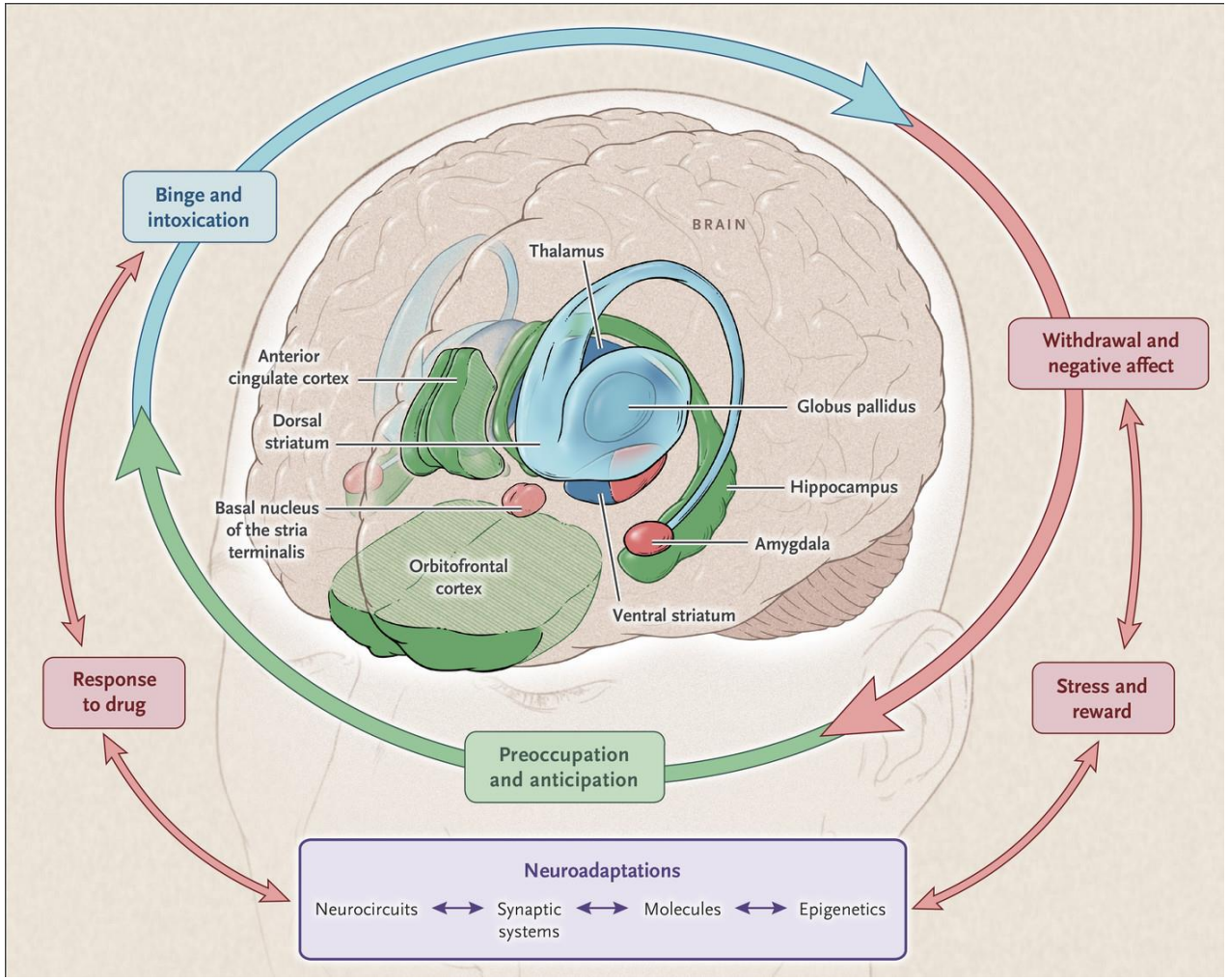
Impact on home and work life, relationships, activities

Mild: 2-3 symptoms
Moderate: 4-5 symptoms
Severe: 6+ symptoms

Addiction is a chronic brain disease

- Loss of control
- Compulsive use
- Continued use despite harm



Volkow ND, et al. NEJM. 2016.

Screening for Unhealthy Alcohol Use

Recommendation Summary

Summary of Recommendations and Evidence

Population	Recommendation	Grade (What's This?)
Adults aged 18 and older	The USPSTF recommends that clinicians screen adults aged 18 years or older for alcohol misuse and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions to reduce alcohol misuse	B

Single item screening

- “Do you sometimes drink beer, wine, or other alcoholic beverages?”
  - If yes, “How many times in the past year have you had five (four for women and men > 65) or more drinks in a day?”

Smith PC, et al. J Gen Intern Med. 2009.
McNeely J, et al. J Gen Intern Med. 2015.

Additional Screening

- CAGE
  - 1 positive answer should lead to further probing
- AUD
  - H
  - H
  - H
- Pro
  - E

C =	"Have you ever felt you should **C**ut down on your drinking?"
A =	"Have people **A**nnoyed you by criticizing your drinking?"
G =	"Have you ever felt bad or **G**uilty about your drinking?"
E =	"Have you ever had a drink as an **E**ye-opener first thing in the morning to steady your nerves or help a hangover?"

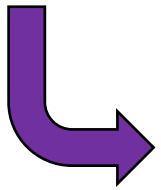
typical

r use

n J Psychiatry 1974.
Ewing JA. JAMA 1984.
Bradley K, et al. Alcohol Clin Exp Res 2007.

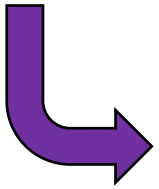
Patients

- DM
  - ~28 drinks/week (likely more)
  - No social, legal, medical, or work consequences



Risky alcohol use

- RW:
  - ~42 drinks/week
  - DUI and employment issues
  - Shakes when not using alcohol
  - Strong alcohol cravings

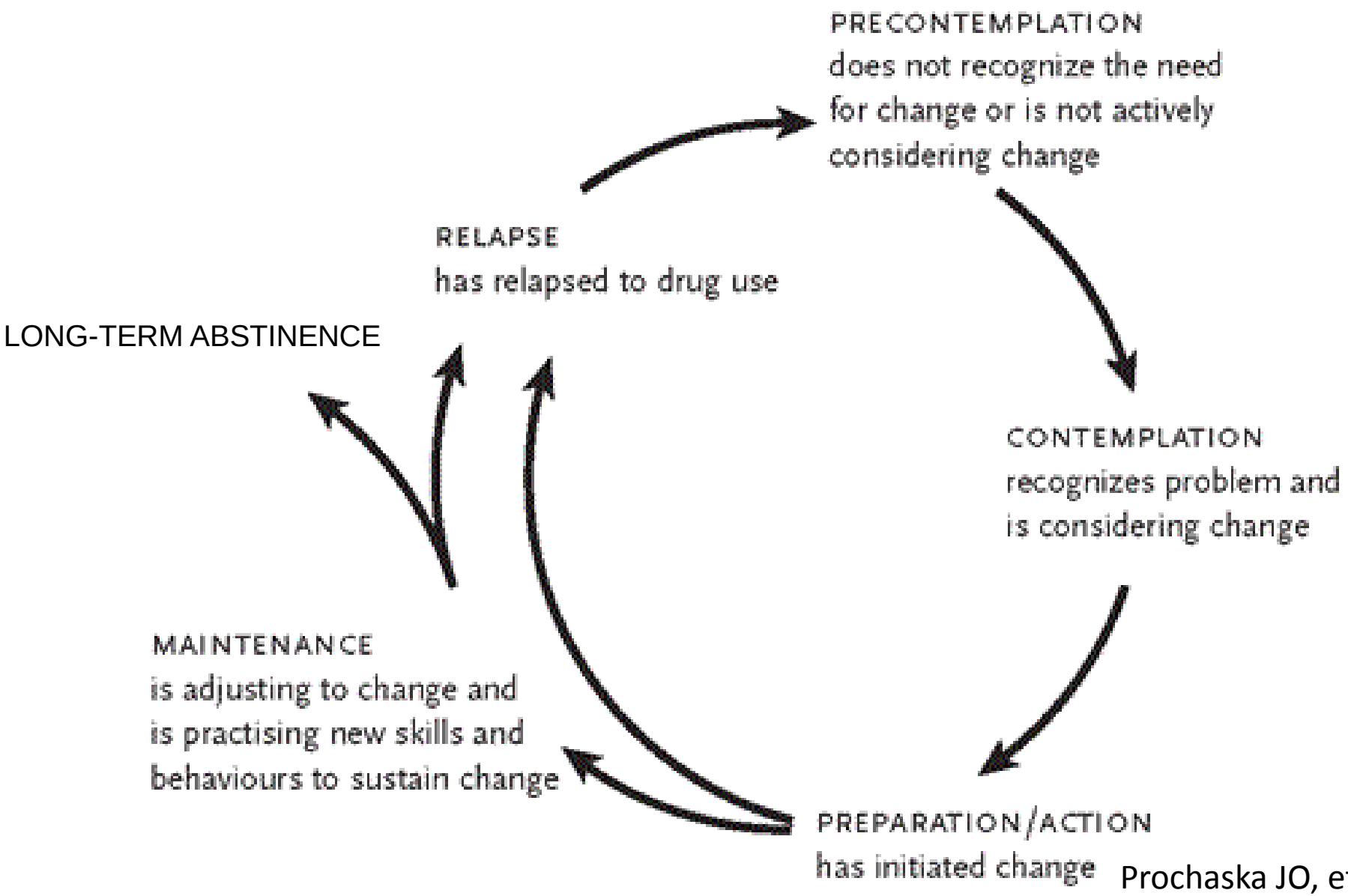


Alcohol use disorder (severe)

Treatment

- Brief intervention
- Medications
- Medical detoxification
- Psychosocial interventions

Stages of change



Prochaska JO, et al. Am Psychol 1992.

Patients

- “I don’t really drink that much and I’ve never had any problems.”

  - DM

Precontemplative

- “My liver is pretty serious and now that I’m cured of hepatitis C I want to make sure it gets healthy.”

  - RW

Contemplative/ Preparation

Brief Intervention

- Effective in primary care settings for risky alcohol use and mild alcohol use disorder
- Repeated interventions > single episode
- Data is less convincing for inpatients and patients in the ED
  - May be confounded by relative severity of alcohol use disorder in these populations

- Who delivers the intervention?
  - PCPs (best evidence)
  - Nurses, psychologists, social workers, behavioral health specialists

Rastegar & Fingerhood. *Addiction Medicine.* 2016.
Saitz R, et al. Ann Int Med 2007.

Brief Intervention

- Draw discrepancy between situation and goals
- Provide clear advice
- Therapeutic empathy

Miller & Rollnick. *Motivational Interviewing.* 2002.

Pharmacotherapy for Alcohol Use Disorder

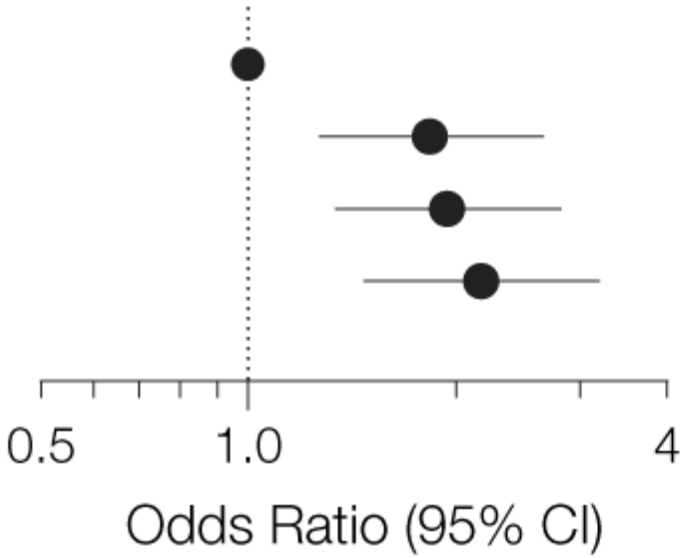
Alcohol Use Disorder Pharmacotherapy

- Modulation of neurotransmitter systems involved in alcohol use disorder

- Naltrexone
- Acamprosate
- Disulfiram

Oral Naltrexone reduces heavy drinking similarly to targeted behavioral therapy

Treatment	Odds Ratio (95% CI)
Placebo Naltrexone/No CBI	1.00
Placebo Naltrexone/CBI	1.82 (1.26-2.65)
Naltrexone/CBI	1.93 (1.33-2.80)
Naltrexone/No CBI	2.16 (1.46-3.20)

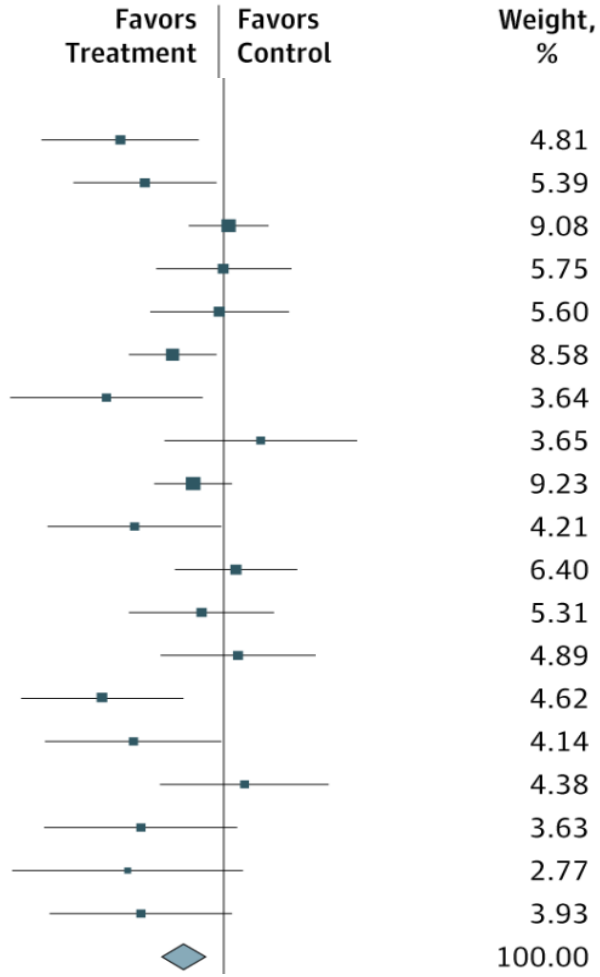


CBI = Combined Behavioral Intervention – 20 x 50 min counseling sessions delivered by behavioral health specialists

Anton RF et al. *JAMA* 2006.

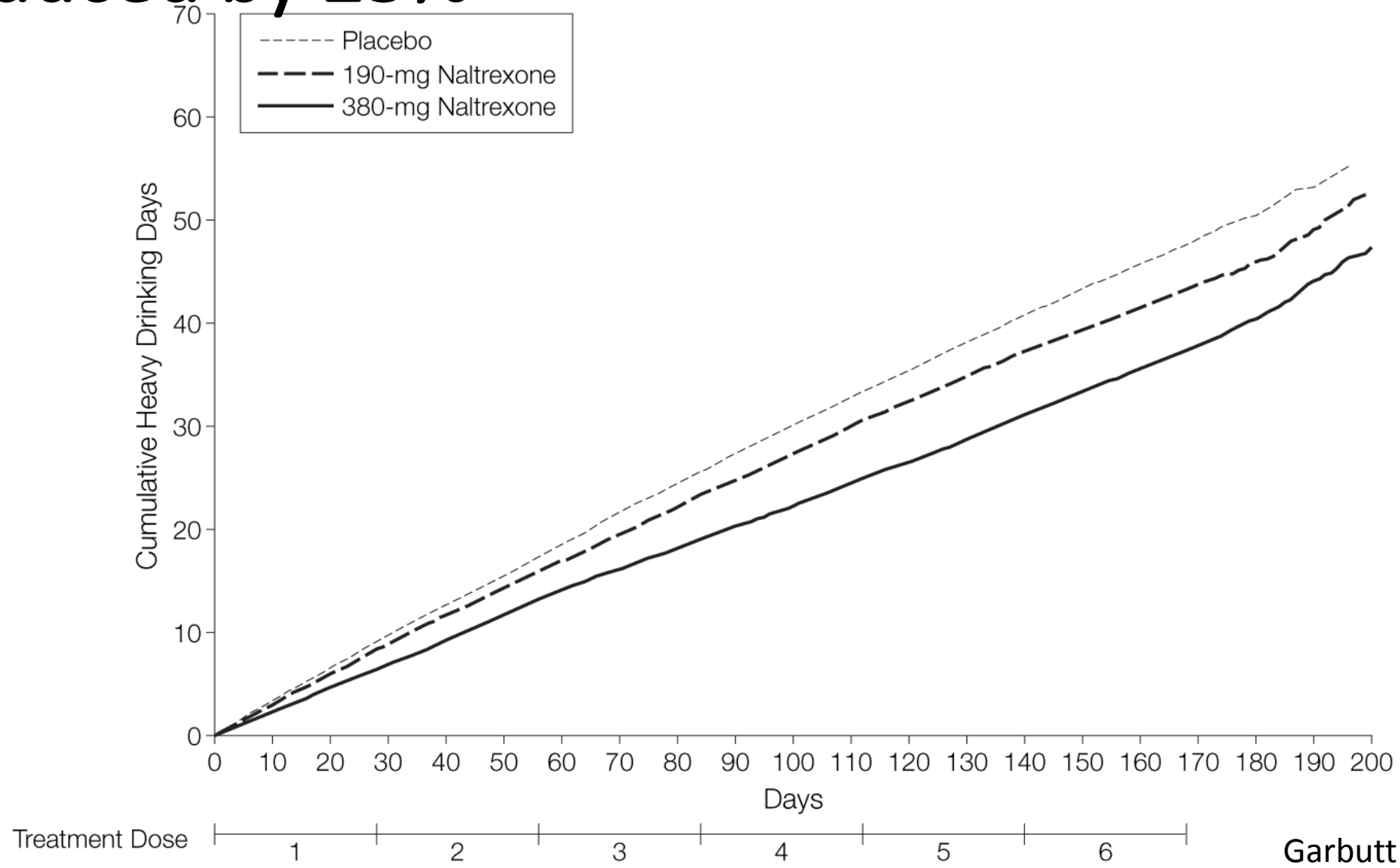
Oral Naltrexone – Return to heavy drinking significantly reduced

Source	Duration, wk	Risk of Bias	Treatment Group Events, No.	Treatment Group No Events, No.	Control Group Events, No.	Control Group No Events, No.	Risk Difference (95% CI)	Weight, %
Naltrexone (50 mg/d oral)								
Anton et al,[59] 1999	12	Med	26	42	38	25	-0.22 (-0.39 to -0.05)	4.81
Anton et al,[72] 2005	12	Med	33	48	46	34	-0.17 (-0.32 to -0.02)	5.39
Balldin et al,[60] 2003	24	Low	53	3	58	4	0.01 (-0.07 to 0.10)	9.08
Chick et al,[50] 2000	12	Med	57	28	53	26	-0.00 (-0.14 to 0.14)	5.75
Gastpar et al,[61] 2002	12	Med	34	50	36	51	-0.01 (-0.16 to 0.14)	5.60
Guardia et al,[62] 2002	12	Med	8	93	19	82	-0.11 (-0.20 to -0.02)	8.58
Kiefer et al,[39] 2003	12	Low	20	20	30	10	-0.25 (-0.45 to -0.05)	3.64
Killeen et al,[63] 2004	12	Med	21	30	12	24	0.08 (-0.13 to 0.28)	3.65
Krystal et al,[64] 2001	12	Med	183	235	105	104	-0.06 (-0.15 to 0.02)	9.23
Latt et al,[74] 2002	12	Med	19	37	27	24	-0.19 (-0.37 to -0.01)	4.21
Mann et al,[40] 2013	12	Med	86	83	41	44	0.03 (-0.10 to 0.16)	6.40
Monti et al,[75] 2001	12	Med	16	48	19	45	-0.05 (-0.20 to 0.11)	5.31
Morley et al,[38] 2006	12	Low	39	14	43	18	0.03 (-0.13 to 0.20)	4.89
Morris et al,[65] 2001	12	Med	28	27	43	13	-0.26 (-0.43 to -0.09)	4.62
O'Malley et al,[66] 1992	12	Med	24	28	34	18	-0.19 (-0.38 to -0.01)	4.14
O'Malley et al,[67] 2007	12	Med	39	18	32	18	0.04 (-0.14 to 0.22)	4.38
O'Malley et al,[36] 2008	16	Med	22	12	28	6	-0.18 (-0.38 to 0.03)	3.63
Oslin et al,[68] 1997	12	Med	3	18	8	15	-0.20 (-0.45 to 0.04)	2.77
Volpicelli et al,[70] 1997	12	Med	17	31	26	23	-0.18 (-0.37 to 0.02)	3.93
Subtotal: $I^2 = 43.7\%$; $P = .02$							-0.09 (-0.13 to -0.04)	100.00



Jonas DE. JAMA 2014.

Injectable Naltrexone – Heavy drinking days reduced by 25%



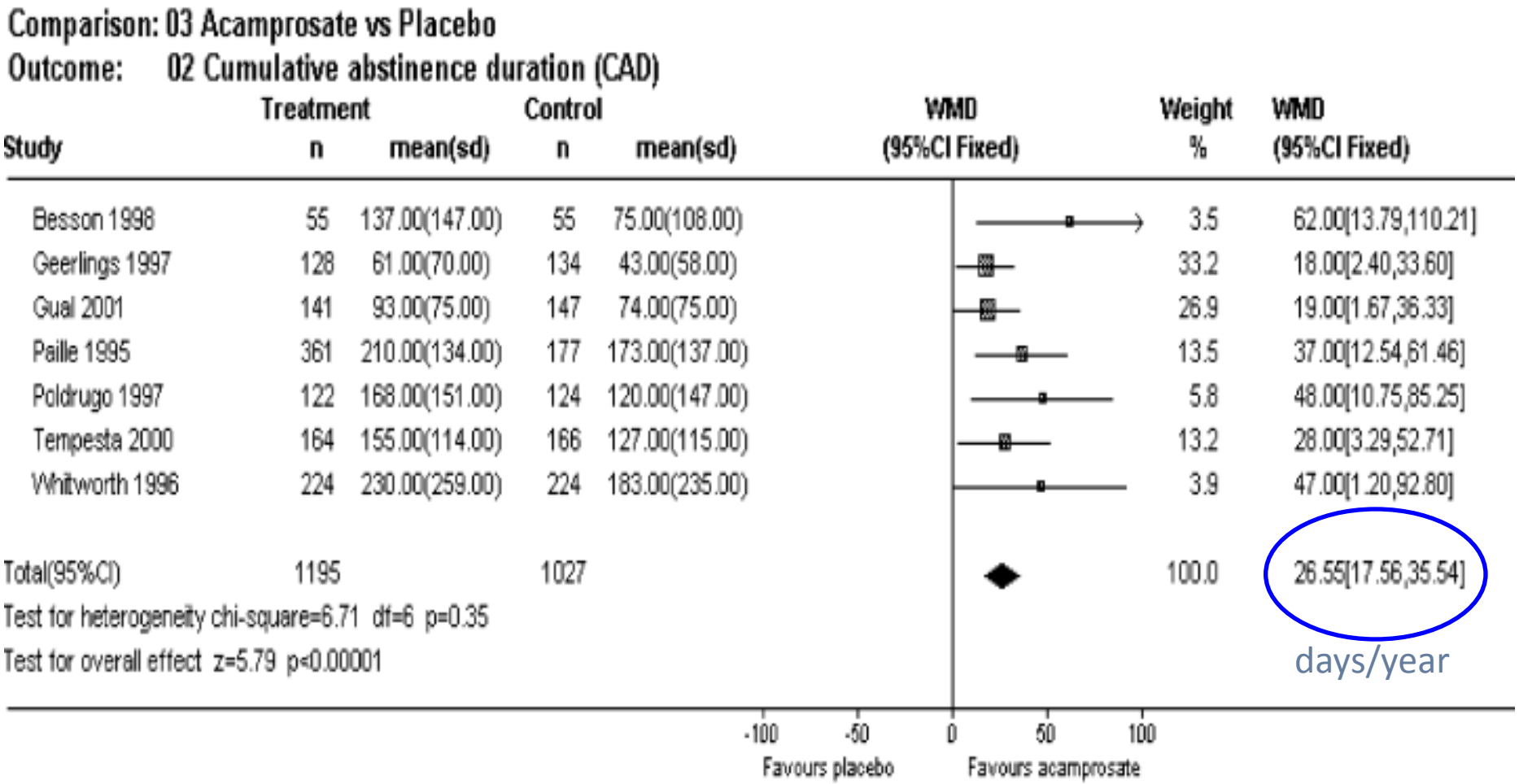
Garbutt JC. JAMA. 2005.

Naltrexone Prescribing Tips

- 50mg/day dose (oral)
- 380mg q4wks (IM)

- Main side effect: nausea
  - Also: dizziness; hepatitis seen at much higher doses than used for EtOH (> 300mg/day) – recommendation to check LFTs periodically
- Contraindicated in patients on opioids
- Stop 72h preoperatively to allow for opioid analgesia
  - Careful with depot formulation

Efficacy of Acamprosate



Bouza C. Addiction 2004.

Acamprosate Prescribing Tips

- 666mg (2 tabs) TID
  - Dosing frequency may present challenge for adherence
- Primary side effect: Diarrhea
- Contraindicated if CrCl < 30 ml/min

Disulfiram

- Effective if taken under controlled setting
- Placebo-controlled trials have not shown clear improvement

- 250mg/day dosage
- Contraindicated w/ EtOH use, metronidazole, severe CAD

Medical detoxification

- Can be accomplished inpatient or outpatient
- Patients with history of severe withdrawal or at risk for severe withdrawal should be treated inpatient
- Outpatient detox requires close oversight (daily)

Self-help Groups and Inpatient Treatment

- Intensive referral to AA appears most effective
- Residential treatment is a reasonable option if available
- Great variability between inpatient programs

Walsh et al. NEJM 1991.
Timko et al. Addiction 2006.

Resources for Referral in Alcohol Use Disorder

- www.aa.org
  - Includes meetings by zip code
- www.smartrecovery.org
  - Secular alternative with meetings by location
- http://aaagnostica.org/
  - Secular alternative with newsletter
- SAMHSA website
- Local hospital inpatient units

Patient RW

- Occasional AA meetings but sporadic, no sponsor; rare NA meetings
- Sees linkage between health and alcohol (liver damage from HCV and alcohol, friends with alcoholic pancreatitis)

- ED visit for alcohol intoxication, initially reticent to discuss but then admits increased intake
- Inpatient detox
- Started on disulfiram per pt preference, reported 90 days sobriety from alcohol
  - **The most effective medication may be the one the patient believes in

Patient DM

- Discussed linkage between alcohol use, hypertension, and depression, which he was unaware of
- Interested in cutting down but reticent to stop

- Started oral naltrexone
- Self-reports cutting down alcohol use from 48oz to 24oz beer/day since starting medication

Learning Objectives

- Understand the terminology used to describe unhealthy alcohol use
- Identify means of screening for alcohol use disorder
- Describe the utility of brief primary care-based interventions for unhealthy alcohol use
- Achieve familiarity with FDA-approved medications for alcohol use disorder

References

- Bradley K, DeBenedetti AF, Volk RJ, et al. AUDIT-C as a brief screen for alcohol misuse in primary care. Alcohol Clin Exp Res 2007;31:1208-17.
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- Mayfield DG, McLeod G, Hall P. The CAGE questionnaire: validation of a new alcoholism screening instrument. Am J Psychiatry 1974;131:1121-3.
- Timko C, DeBenedetti A, Billow R. Intensive referral to 12-step self-help groups and 6-month substance use disorder outcomes. Addiction 2006;101(5):678-88.