Psychiatric Effects of Cannabis



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Disclosures

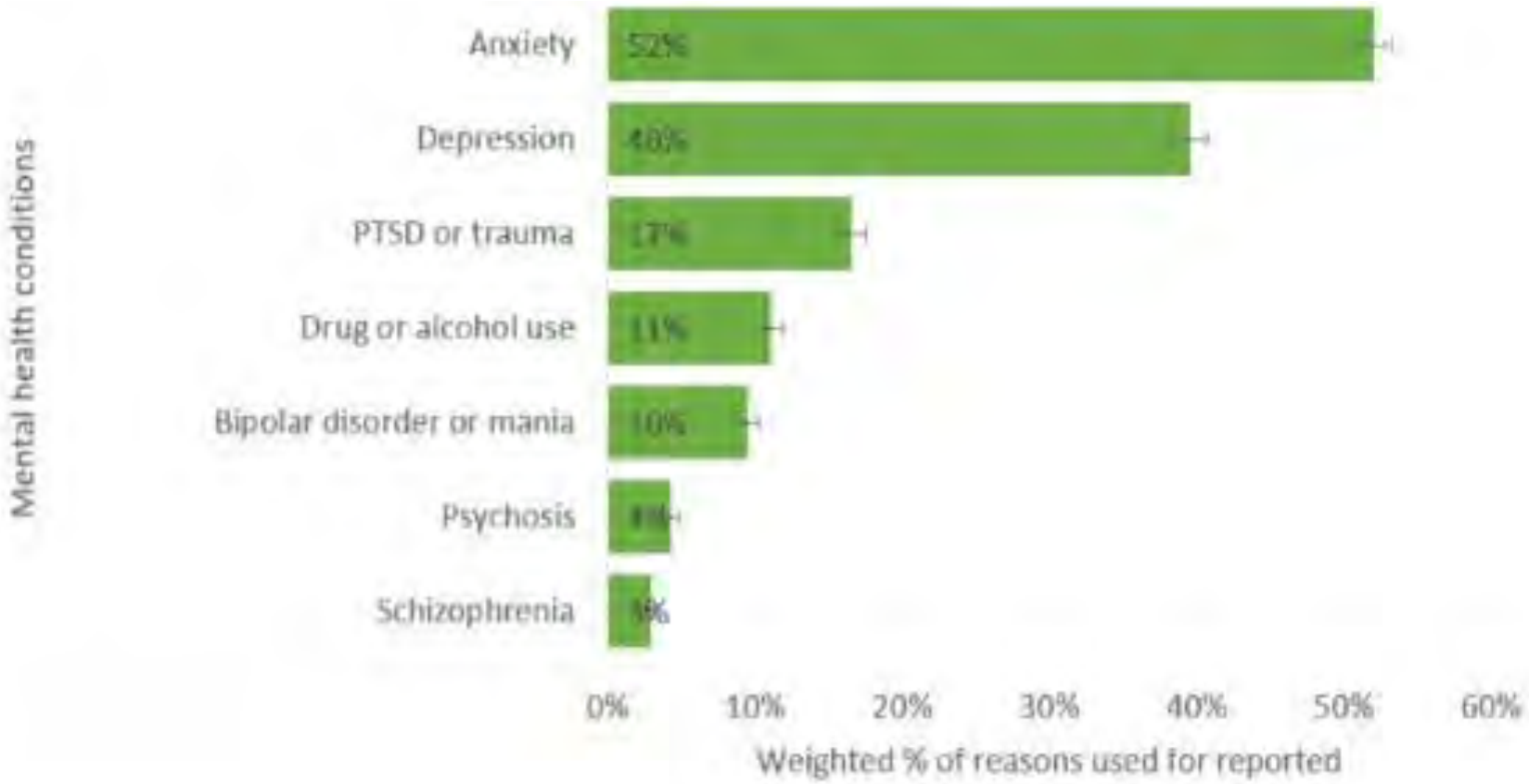
- Received funding as speaker for Clinicians Course at the annual meeting for the American Association for the Treatment of Opioid Dependence
- Served on Data Safety and Monitoring Board for Friends Research Institute

“Cannabis is the only thing that works for me”

Cannabis Use in the United States



Courtesy of SAMHSA, 2026

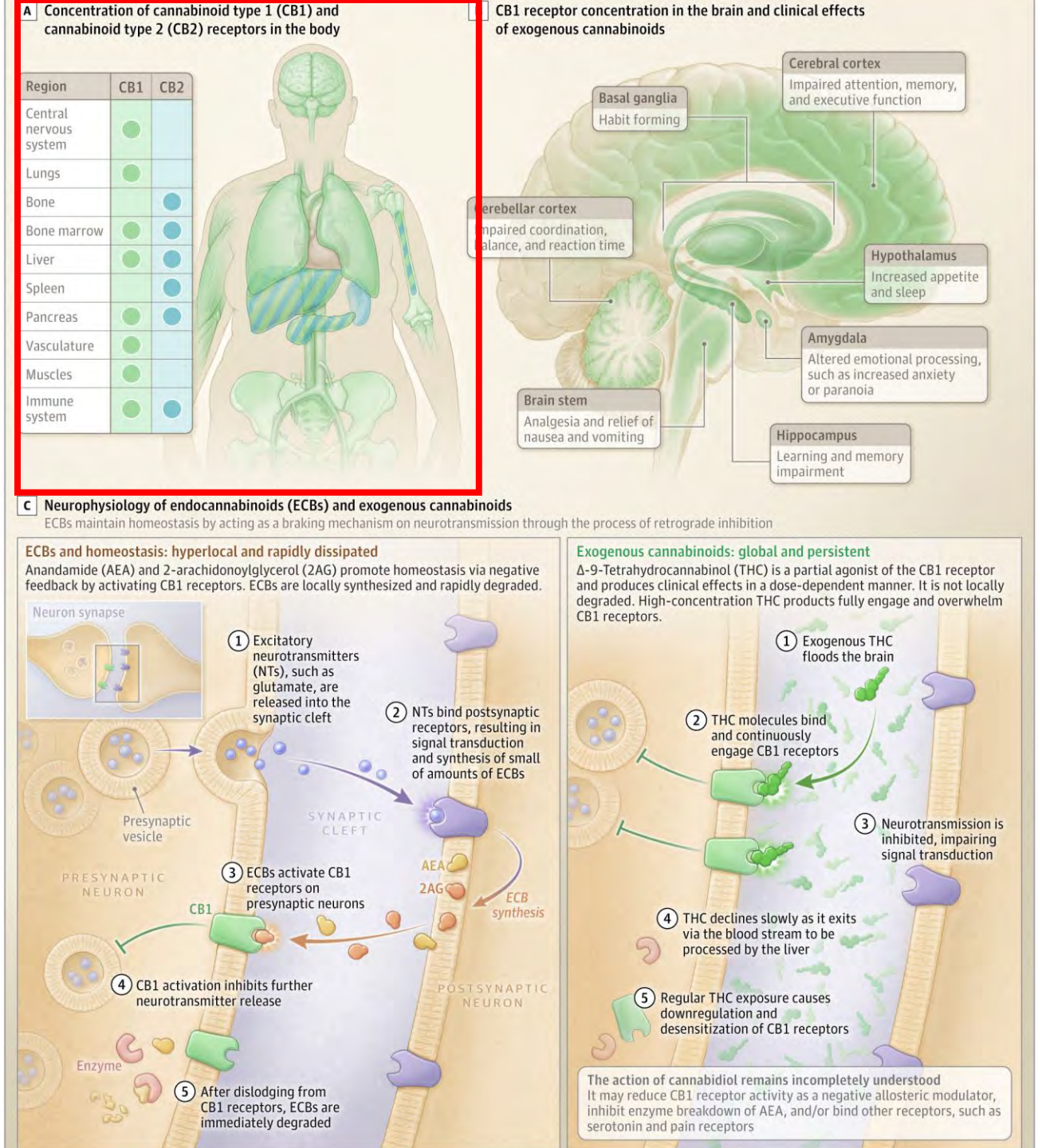


Courtesy of Leung et al., 2022

- Tetrahydrocannabinol (THC)=partial agonist at CB1 receptors; mediates “high” of cannabis; abuse potential

- Cannabidiol (CBD)=low affinity noncompetitive antagonist at CB1 receptors that interacts with other receptors (including $5HT_{1A}$); not associated with high or abuse potential

Courtesy of Kansegara D et al., 2026



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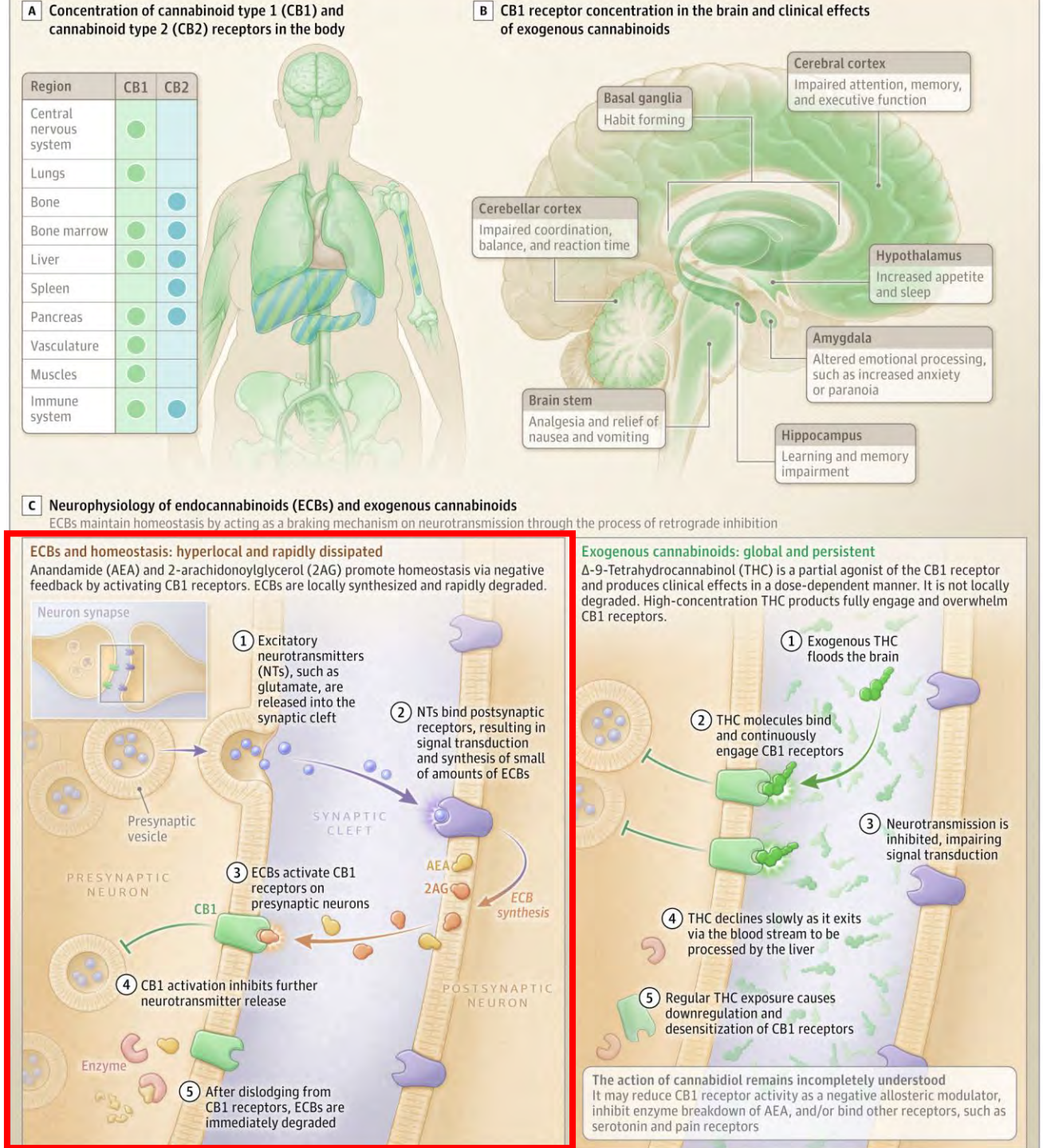

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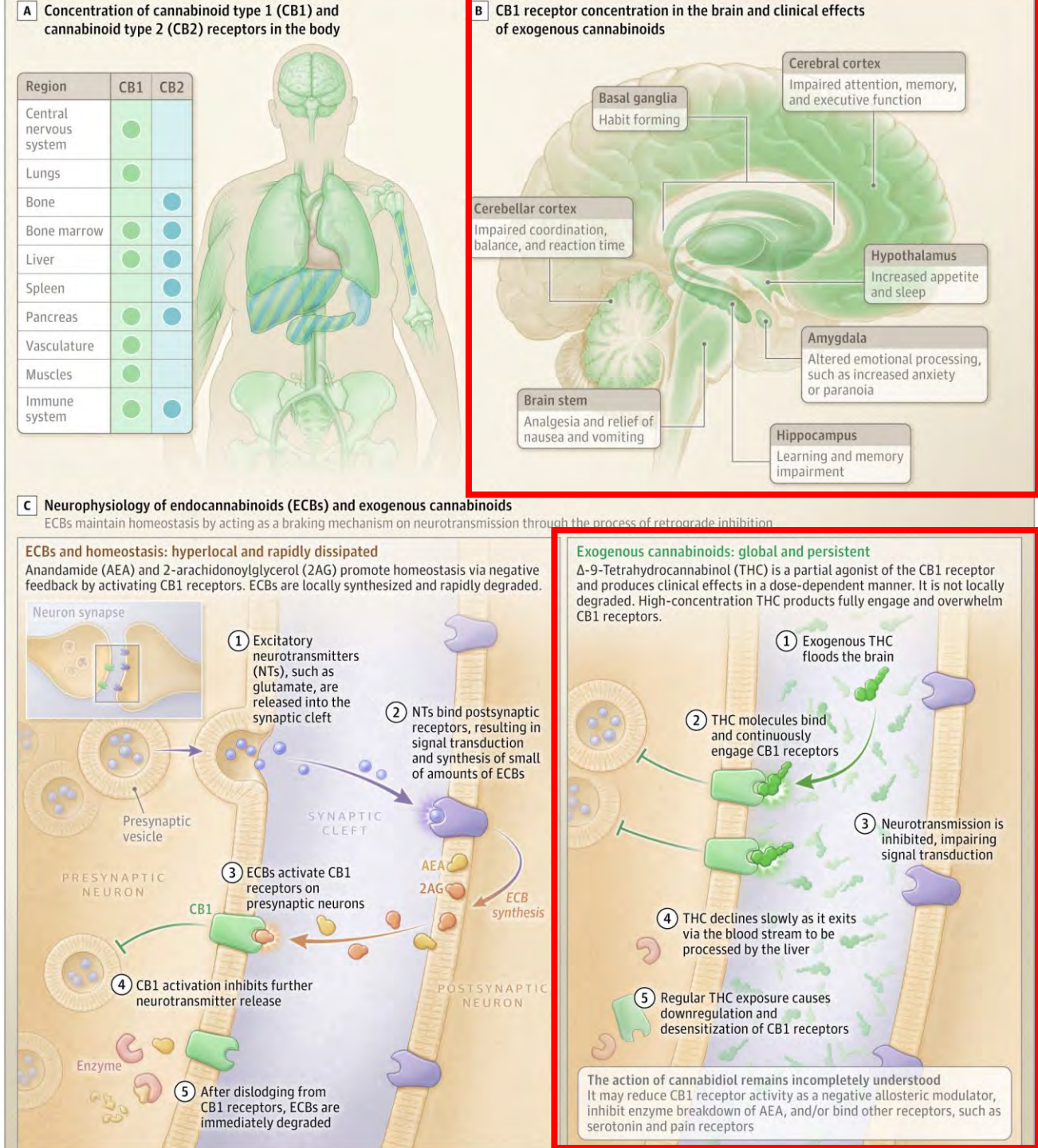
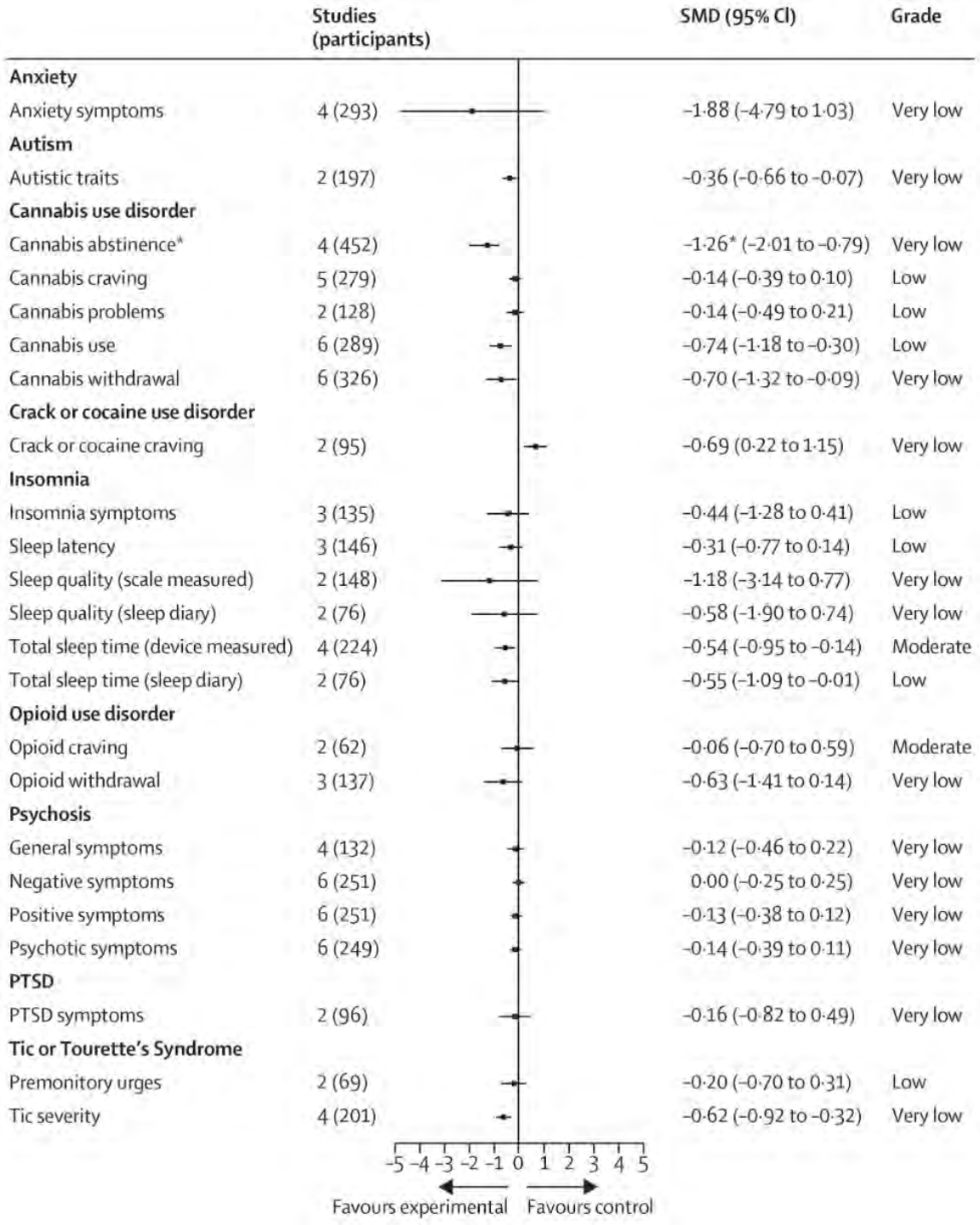
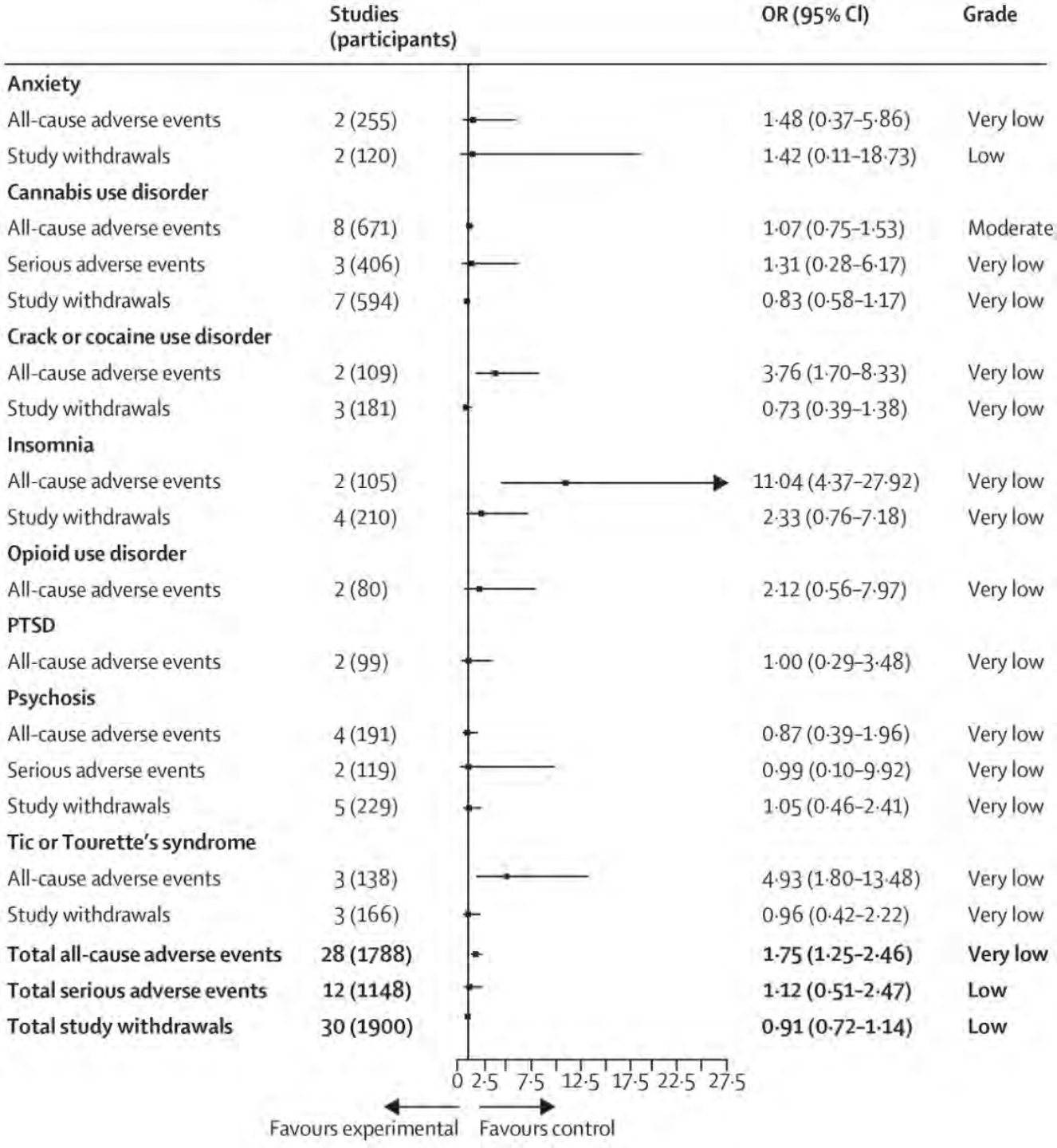




	Studies (participants)	SMD (95% CI)	Grade
Anxiety			
Anxiety symptoms	4 (293)	−1·88 (−4·79 to 1·03)	Very low
Autism			
Autistic traits	2 (197)	−0·36 (−0·66 to −0·07)	Very low
Cannabis use disorder			
Cannabis abstinence*	4 (452)	−1·26* (−2·01 to −0·79)	Very low
Cannabis craving	5 (279)	−0·14 (−0·39 to 0·10)	Low
Cannabis problems	2 (128)	−0·14 (−0·49 to 0·21)	Low
Cannabis use	6 (289)	−0·74 (−1·18 to −0·30)	Low
Cannabis withdrawal	6 (326)	−0·70 (−1·32 to −0·09)	Very low
Crack or cocaine use disorder			
Crack or cocaine craving	2 (95)	−0·69 (0·22 to 1·15)	Very low
Insomnia			
Insomnia symptoms	3 (135)	−0·44 (−1·28 to 0·41)	Low
Sleep latency	3 (146)	−0·31 (−0·77 to 0·14)	Low
Sleep quality (scale measured)	2 (148)	−1·18 (−3·14 to 0·77)	Very low
Sleep quality (sleep diary)	2 (76)	−0·58 (−1·90 to 0·74)	Very low
Total sleep time (device measured)	4 (224)	−0·54 (−0·95 to −0·14)	Moderate
Total sleep time (sleep diary)	2 (76)	−0·55 (−1·09 to −0·01)	Low
Opioid use disorder			
Opioid craving	2 (62)	−0·06 (−0·70 to 0·59)	Moderate
Opioid withdrawal	3 (137)	−0·63 (−1·41 to 0·14)	Very low
Psychosis			
General symptoms	4 (132)	−0·12 (−0·46 to 0·22)	Very low
Negative symptoms	6 (251)	0·00 (−0·25 to 0·25)	Very low
Positive symptoms	6 (251)	−0·13 (−0·38 to 0·12)	Very low
Psychotic symptoms	6 (249)	−0·14 (−0·39 to 0·11)	Very low
PTSD			
PTSD symptoms	2 (96)	−0·16 (−0·82 to 0·49)	Very low
Tic or Tourette's Syndrome			
Premonitory urges	2 (69)	−0·20 (−0·70 to 0·31)	Low
Tic severity	4 (201)	−0·62 (−0·92 to −0·32)	Very low

- Cannabinoids have not been associated with significant benefit across most tested psych conditions

Courtesy of Wilson et al., 2026

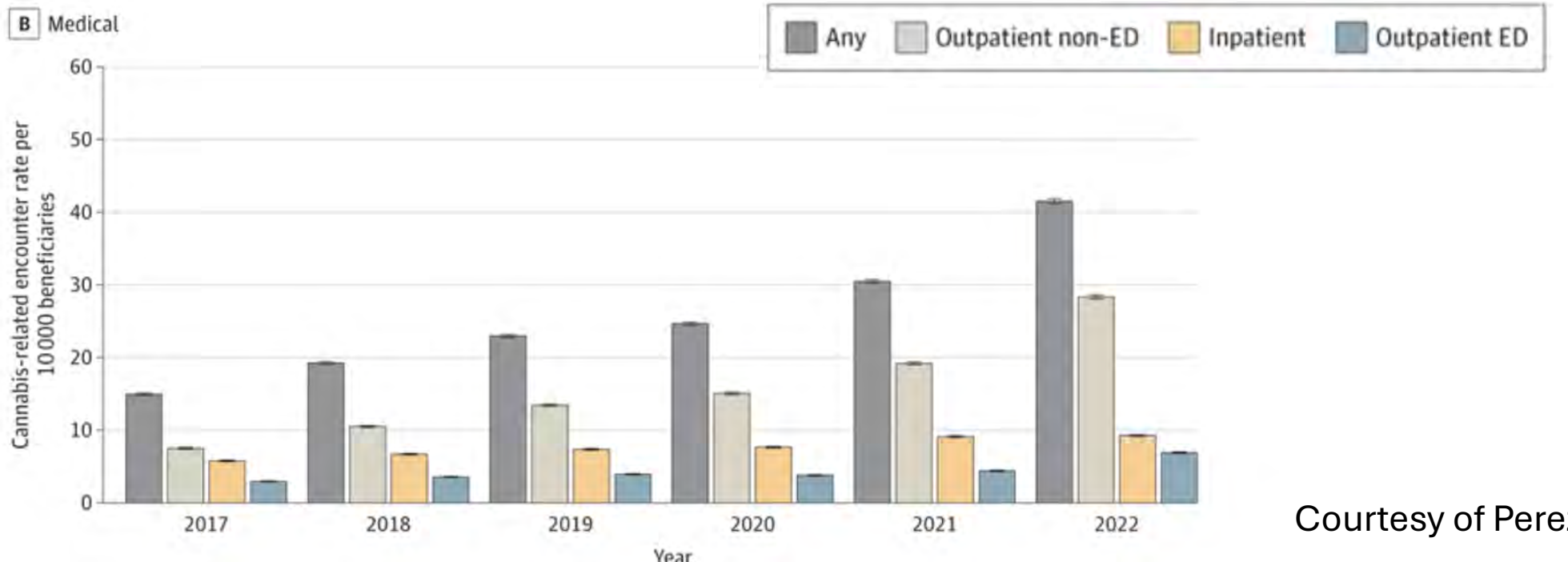


- Cannabinoid treatment overall associated with more adverse events in total
- No increase in serious adverse events or study withdrawals

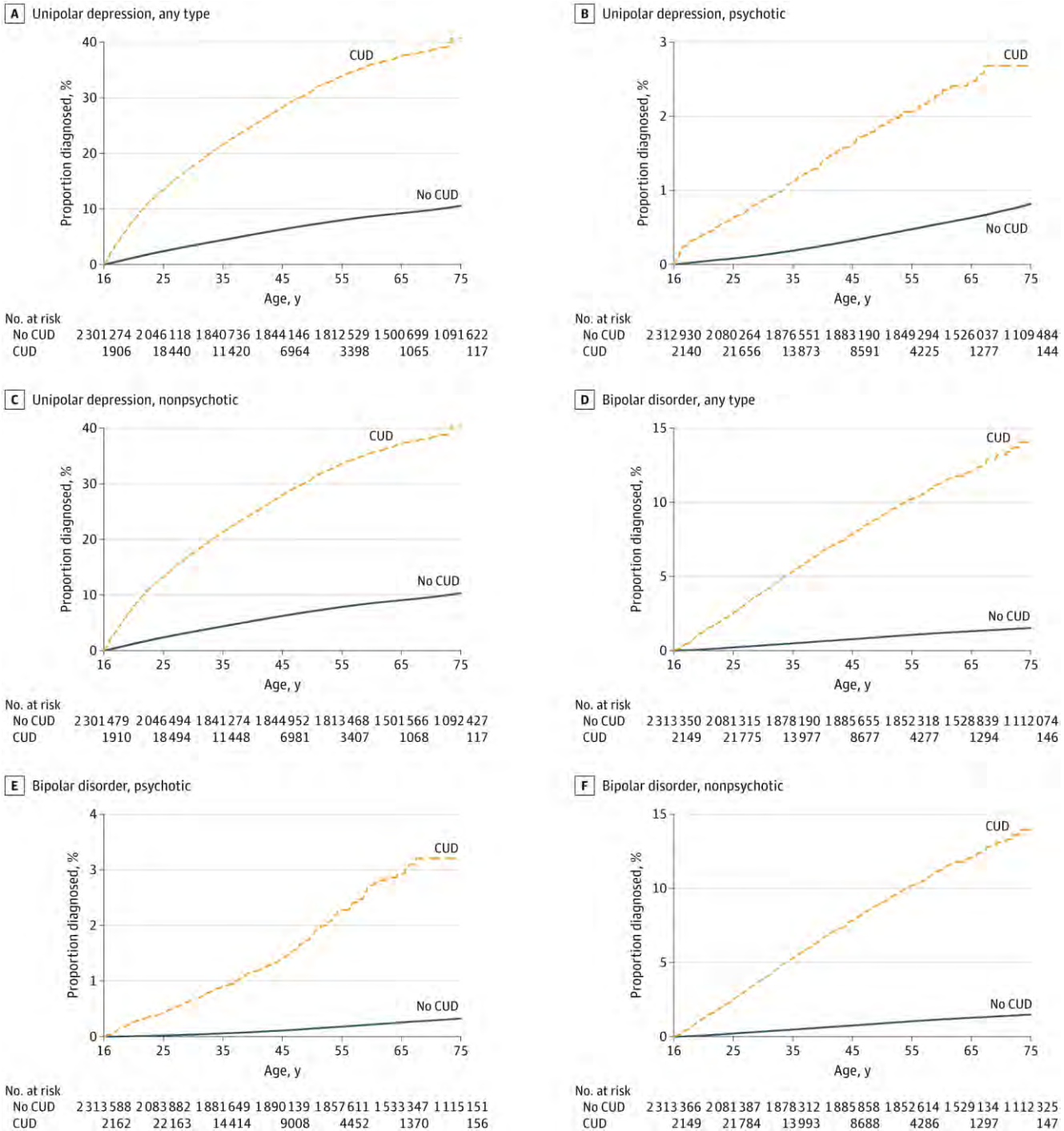
Courtesy of Wilson et al., 2026

Defining “Medical Cannabis”

- Vast majority of individuals using cannabis for medical purposes not using pharmaceutical grade cannabinoid medications
- Cannabis from dispensaries far more potent than cannabis studied in trials
  - Mean THC content of medicinal products=19.2%, far greater than amounts used in clinical trials



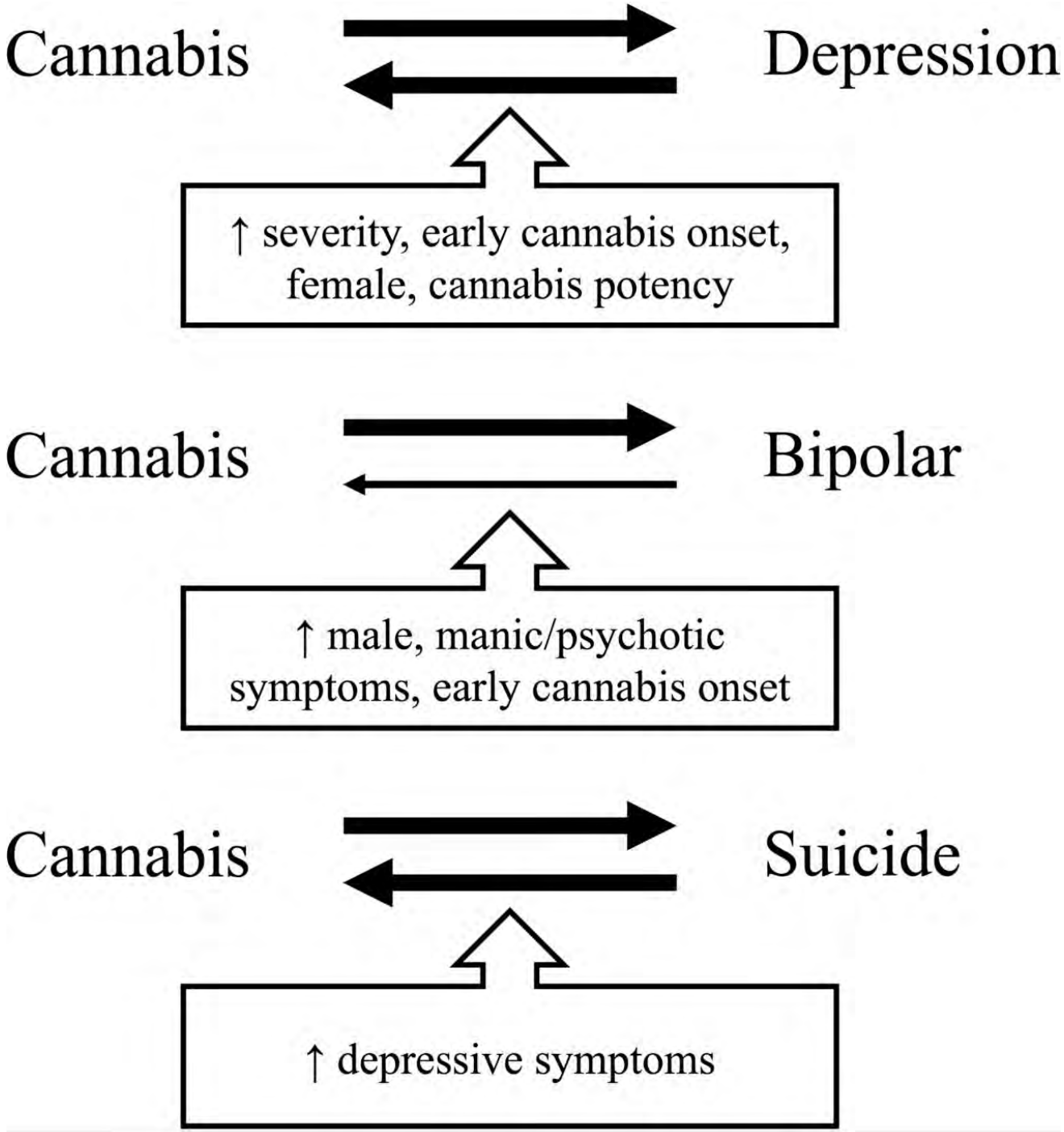
Courtesy of Perez-Vilar et al., 2024



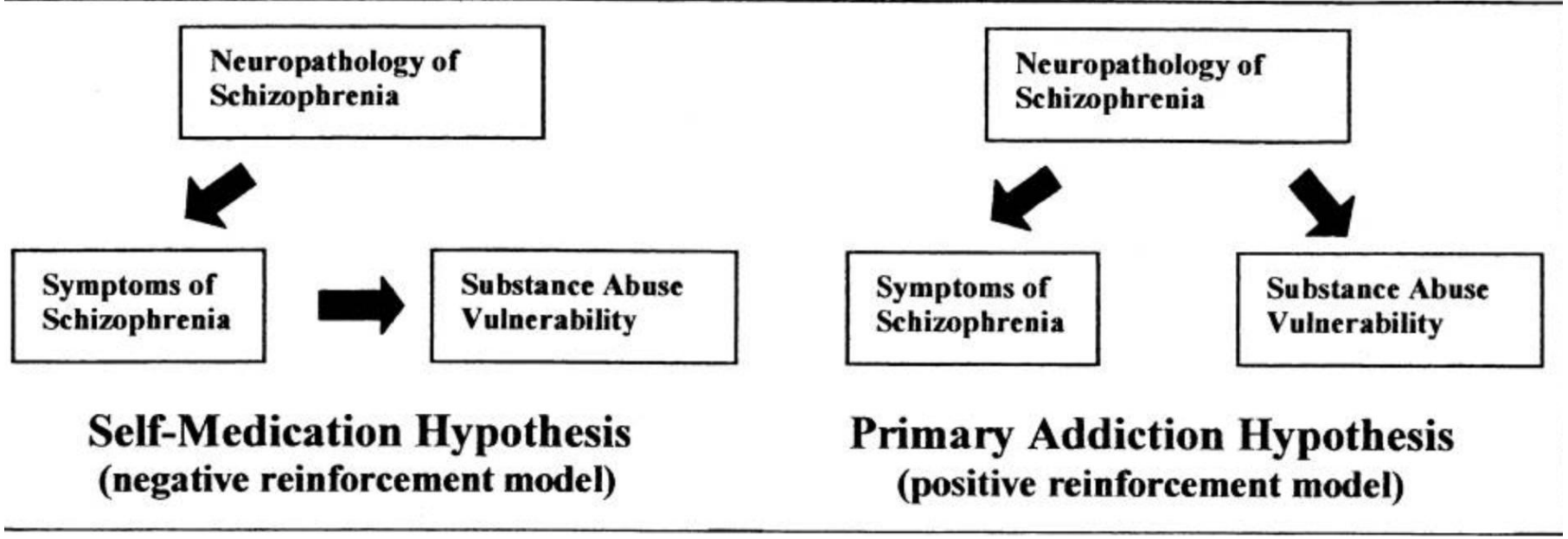
Cannabis for Mood Disorders

- CANMAT recommends against cannabis use in MDD and BPAD
- Evidence largely shows cannabis use doesn't help mood disorders; associated with worse outcomes (e.g. more mania, suicidal ideation)

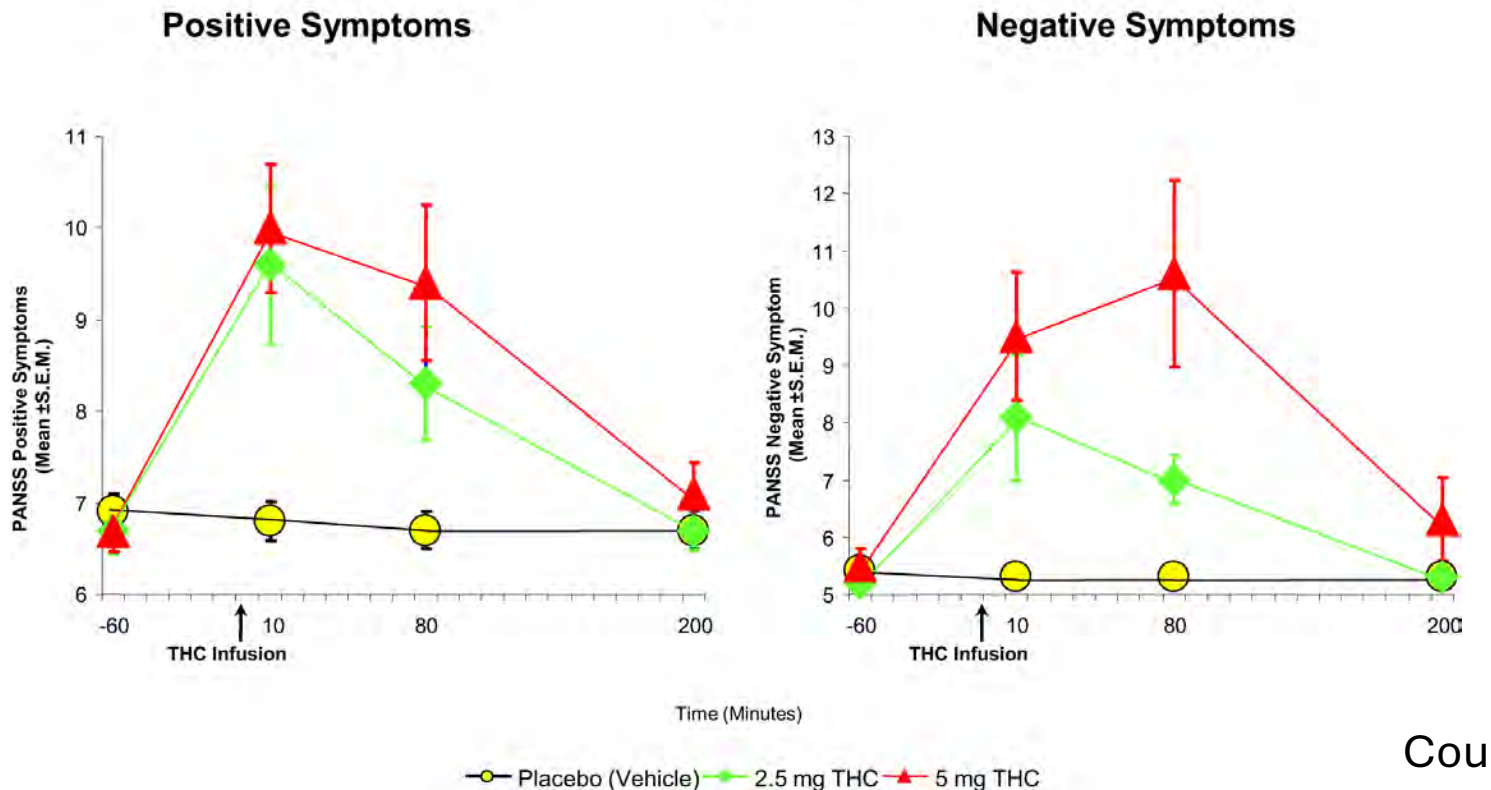
Courtesy of Jefsen et al., 2023



Courtesy of Kuhns et al., 2022



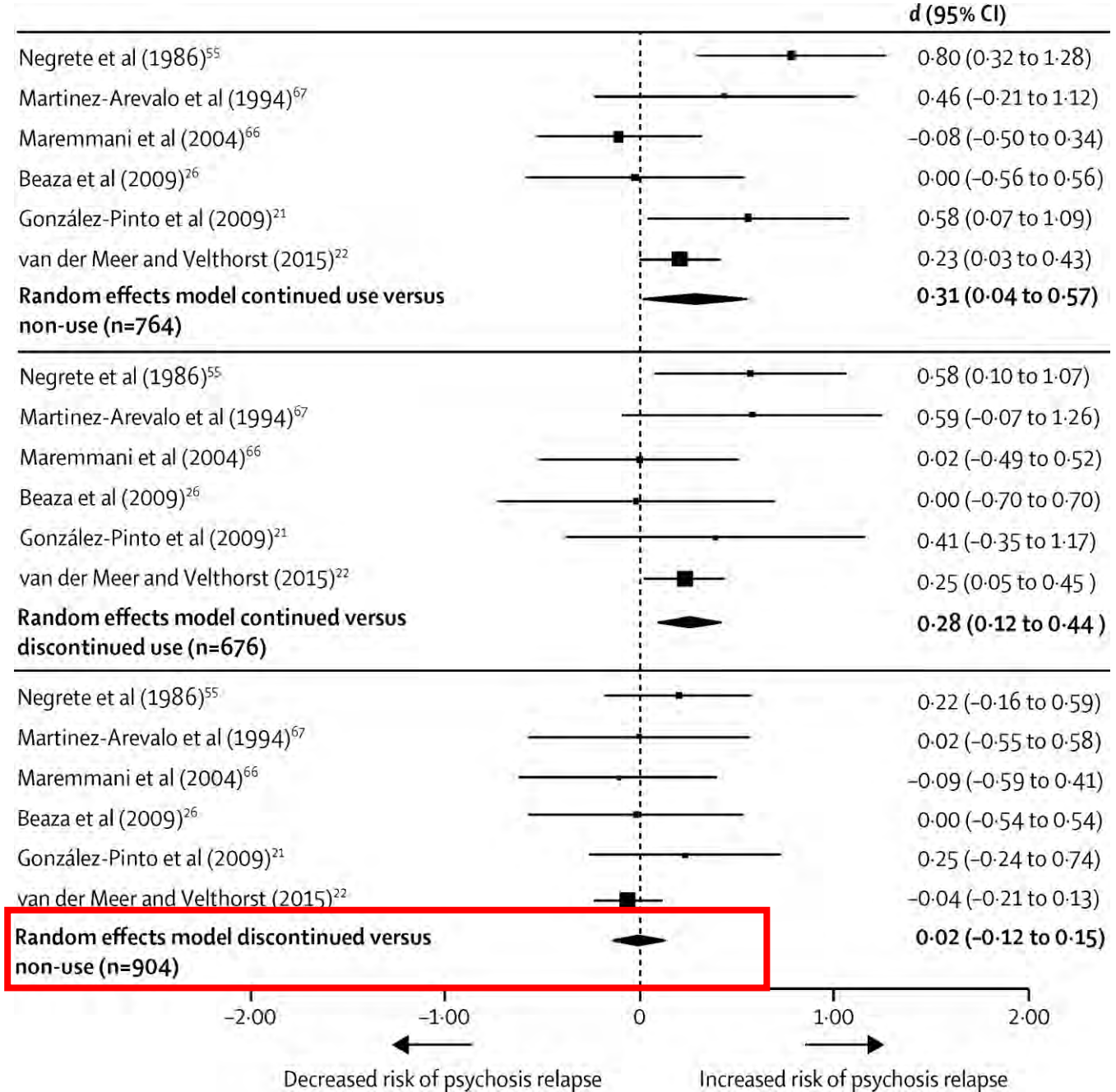
Courtesy of Chambers et al., 2001



Courtesy of Radhakrishnan et al., 2014

Cannabis Use and Pre-existing Psychosis

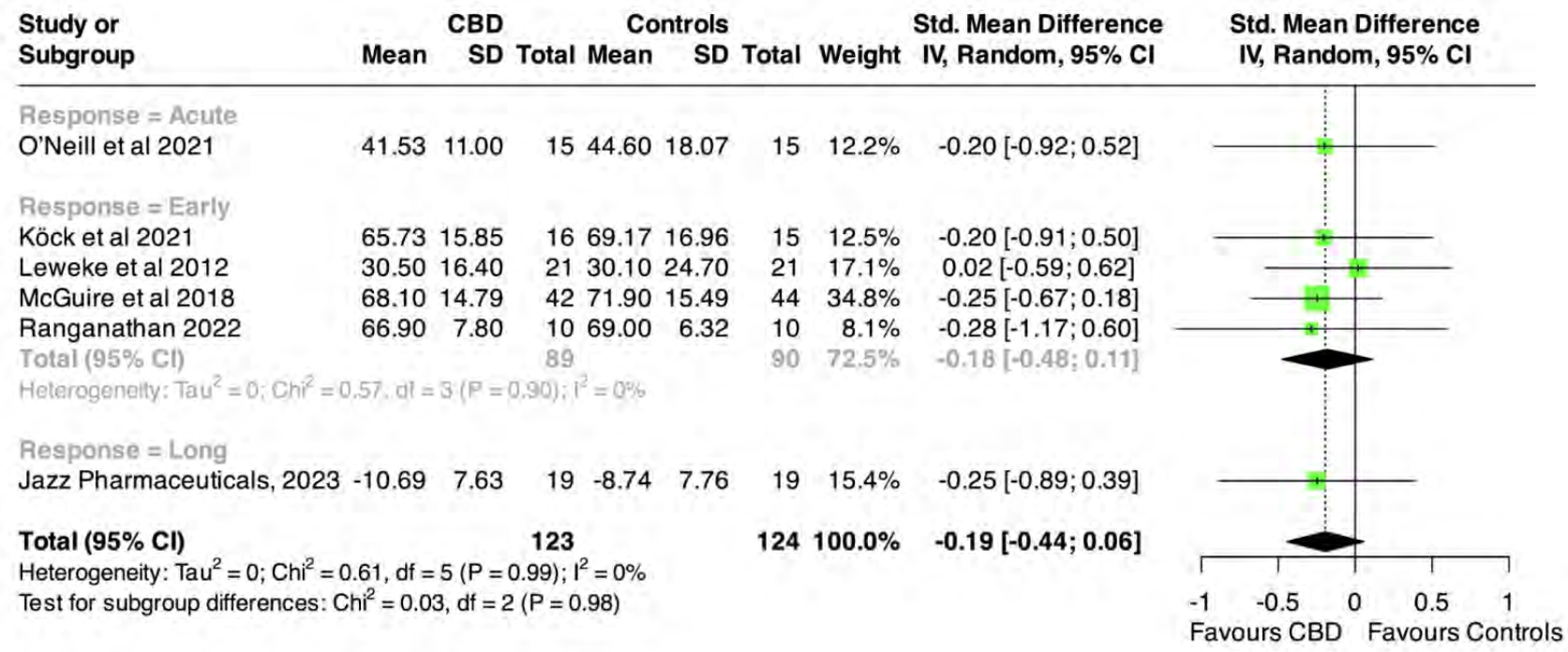
- Worse clinical outcomes.
- Treatment non-adherence may mediate poor outcomes.
- Outcomes of those who discontinue cannabis use do not differ significantly from those who do not use cannabis (see right).



Courtesy of Schoeler et al., 2016

CBD and Psychosis

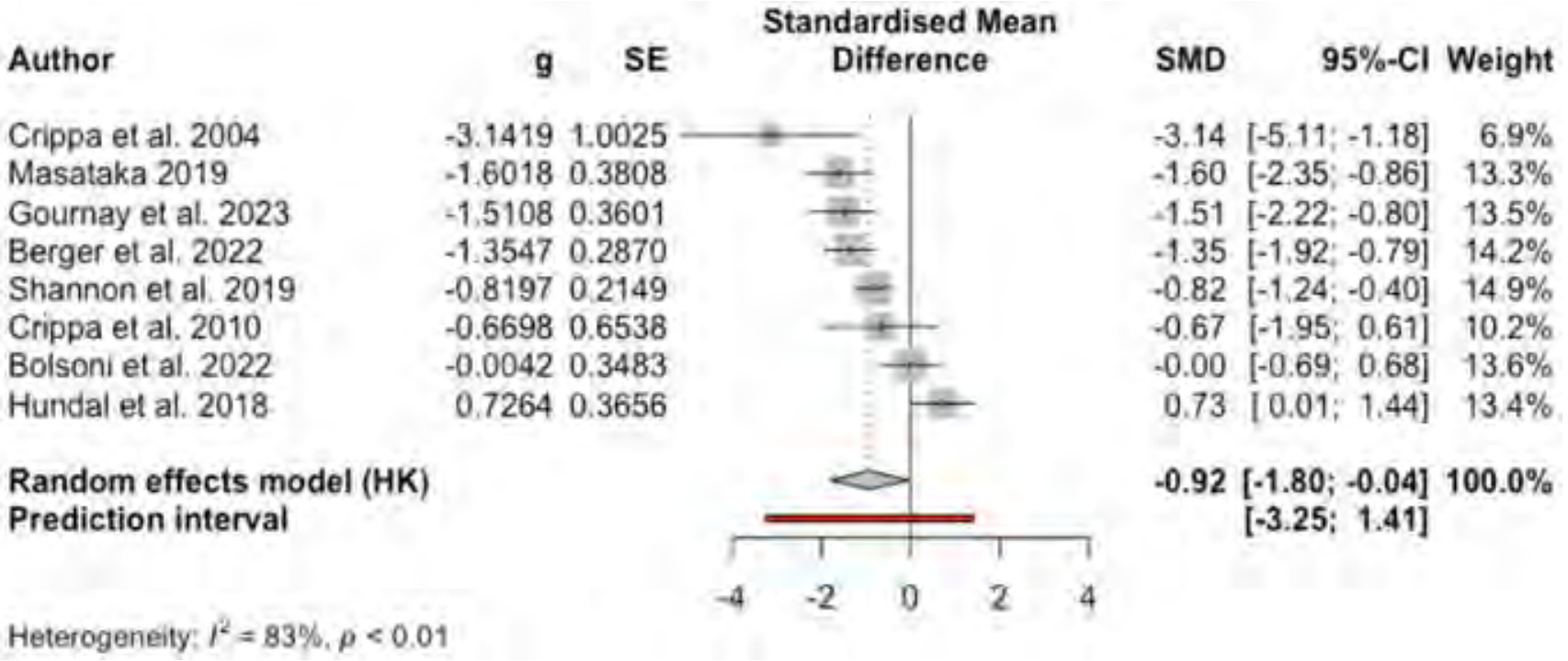
- Lacks same psychoactive effects as THC
- Does not appear to attenuate THC's pro-psychotic effect
- Despite some promising RCTs, has not reliably demonstrated evidence as an antipsychotic



Courtesy of Marchi et al., 2026

Further Possible Benefits of CBD

- Evidence for treatment of anxiety, particularly at higher doses

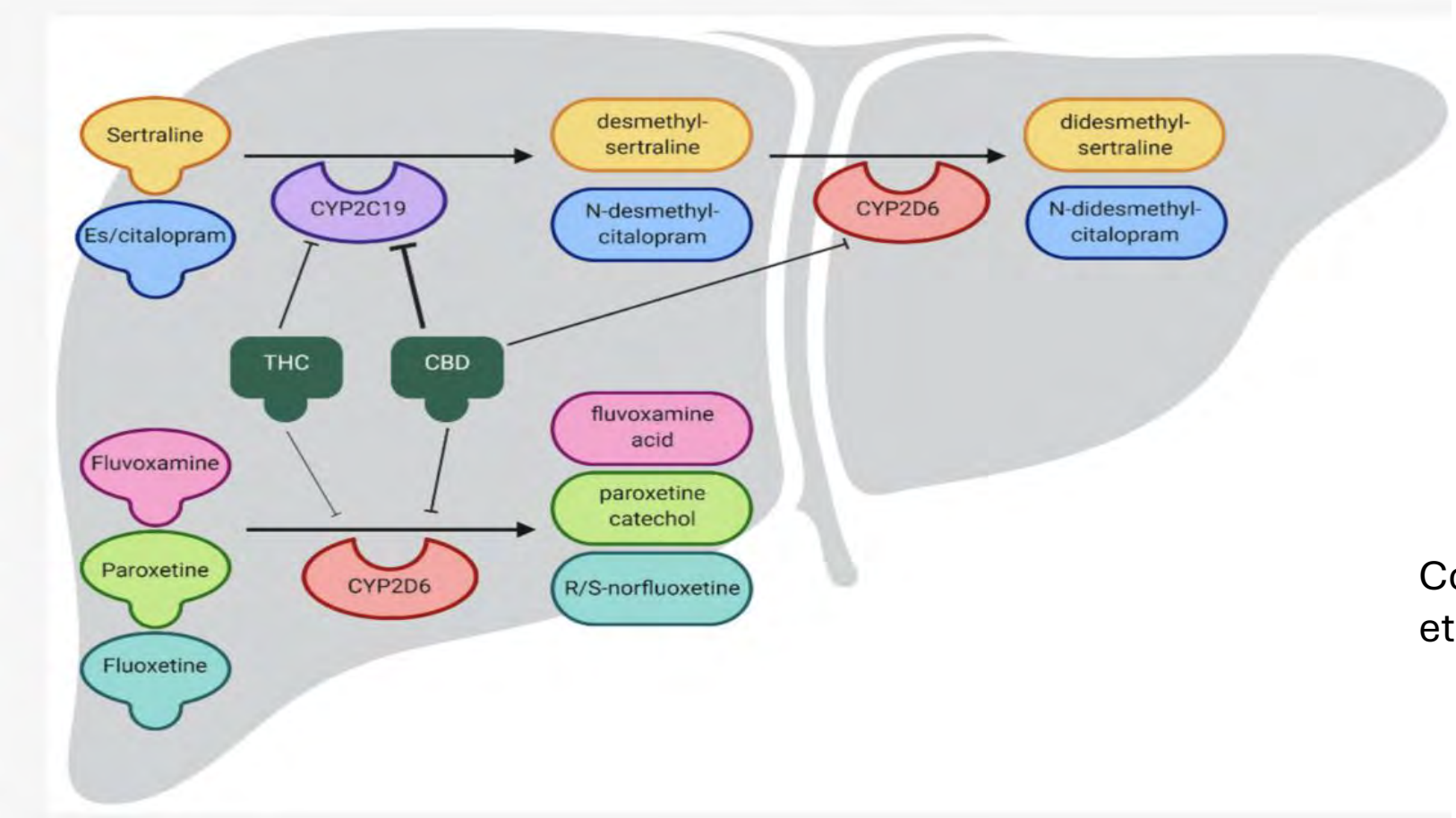


Courtesy of Han et al., 2024

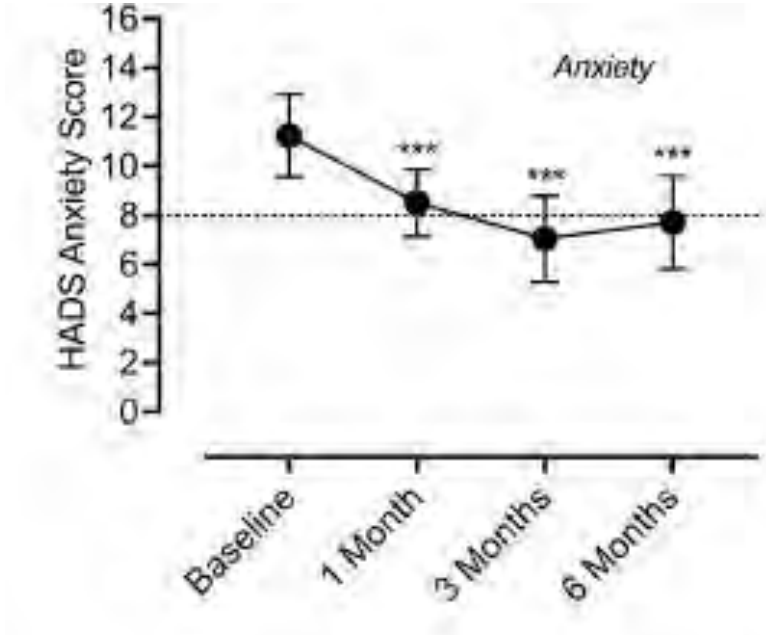
- Also has some evidence for insomnia
- May be useful as a treatment for alcohol withdrawal and alcohol use disorder
- More evidence is needed before making any conclusions

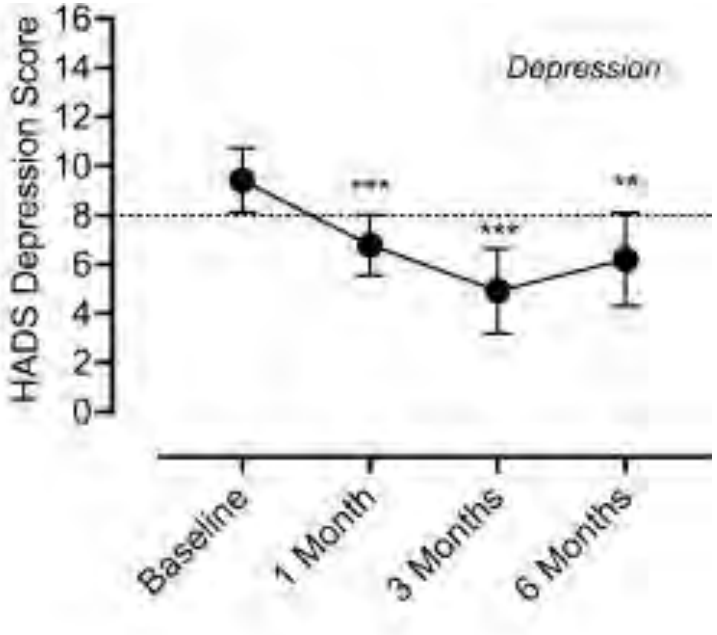
Cannabis and Medications

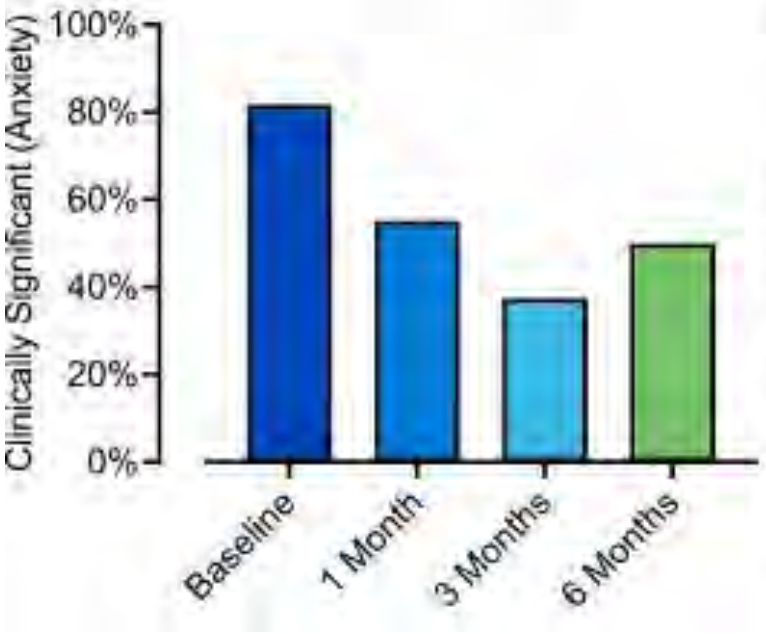
- CBD (and to a lesser extent, THC) inhibit the activity of CYP enzymes involved in the metabolism of major SSRIs
- The clinical effects (if any) of such an interaction have yet to be established

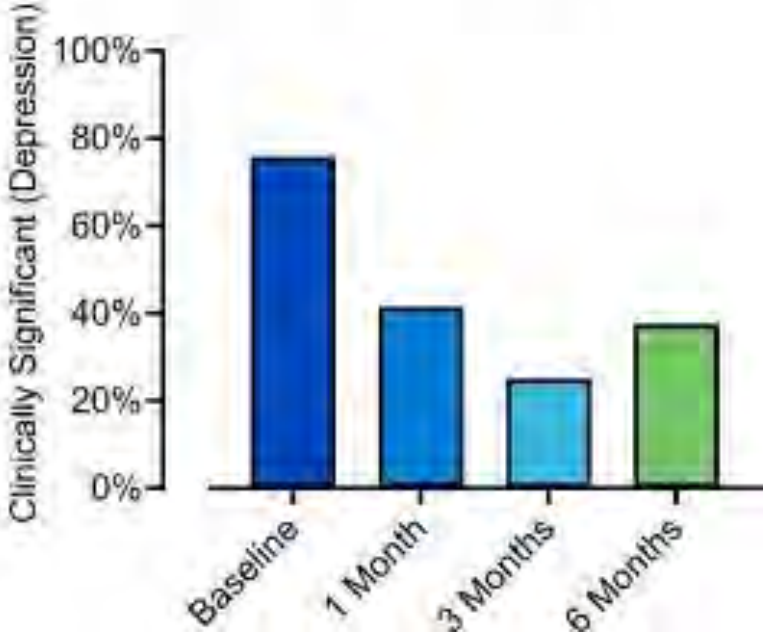


Courtesy of Vaughn et al., 2021









- Medicinal cannabis *may* yield short-term benefits
- Any benefits may not last
- Need more RCTs with medical cannabis patients

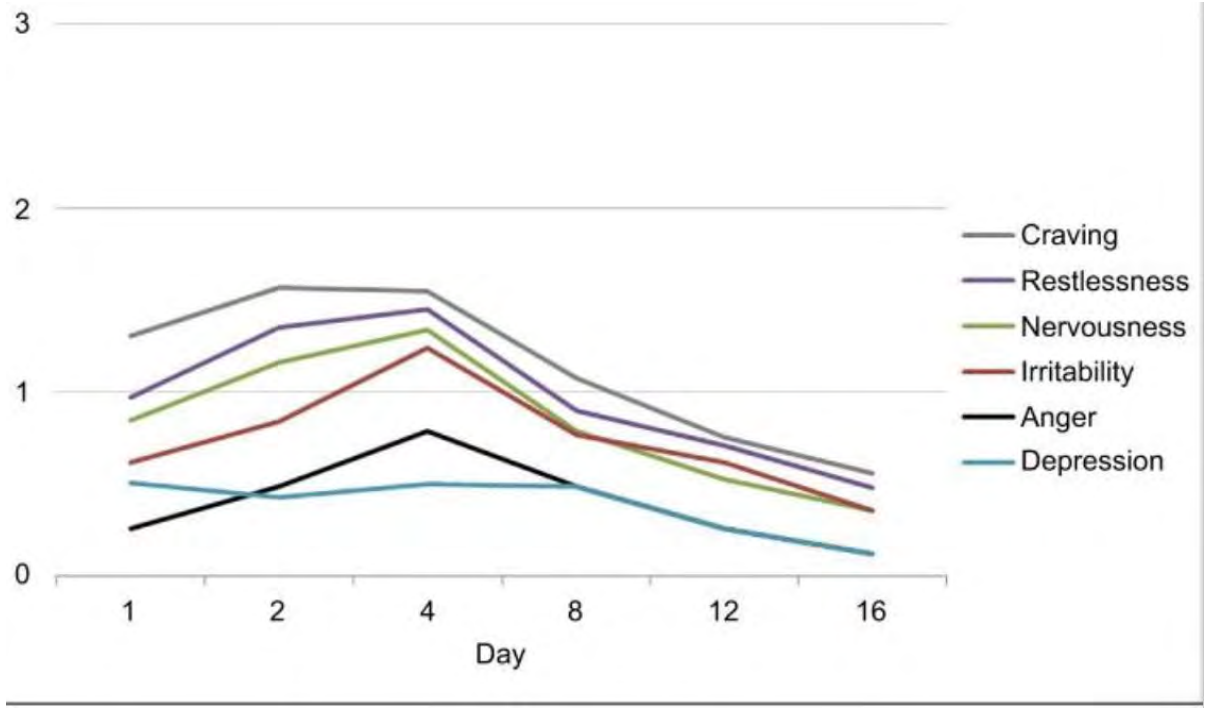
***p<0.01. ***p<0.001*
Courtesy of Wolinsky et al., 2025

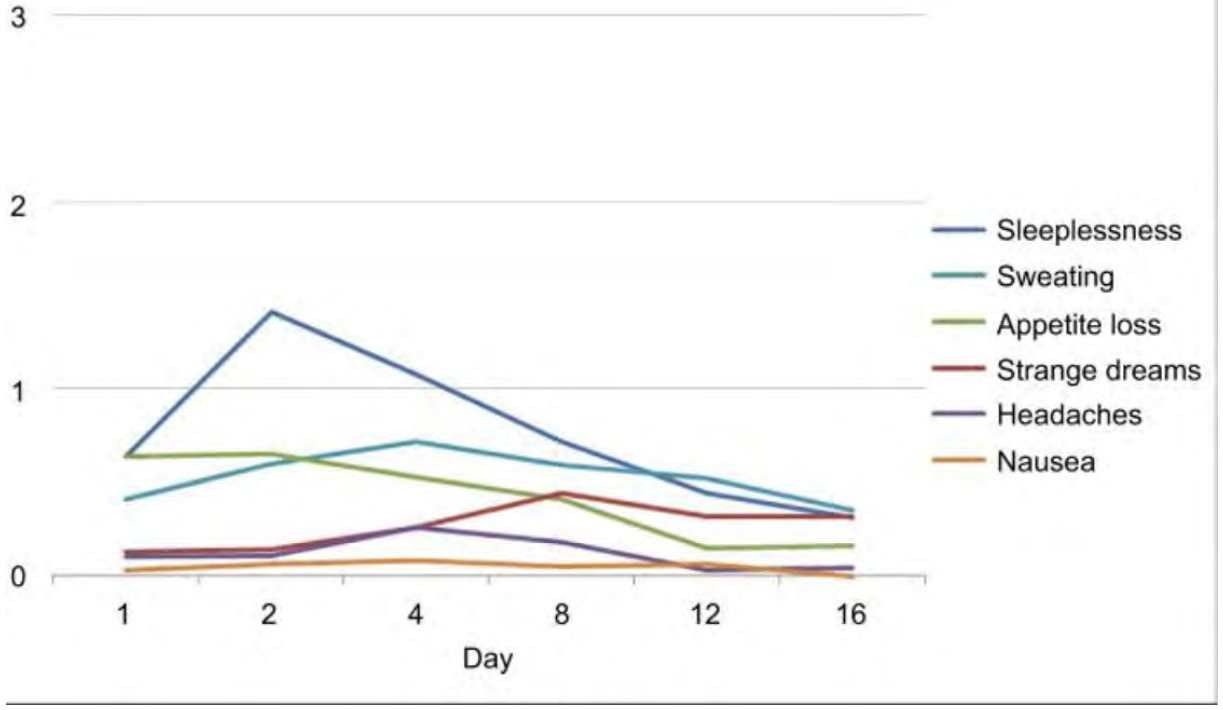
CUD and Cannabis-Related Symptoms Treatments

- No FDA-approved pharmacotherapies for CUD, though a few have some evidence (dronabinol, gabapentin, N-acetylcysteine)
- No antidepressant or antipsychotic particularly efficacious for cannabis-related mood and psychotic symptoms
  - Anticonvulsants and mood stabilizers more likely associated with adverse effects
- Certain psych medications particularly effective for cannabis hyperemesis syndrome
  - Haloperidol has best evidence for acute vomiting
  - Amitriptyline strongest evidence for maintenance treatment

Cannabis Withdrawal Syndrome

- Presents with many psychiatric symptoms and drives dependence
- Be familiar with time course to limit patient frustration during treatment





Y-axes=mean ratings on Marijuana Withdrawal Checklist (MWC), scaled from 0-3 (0 = none, 1 = mild, 2 = moderate, 3 = heavy)

Courtesy of Bonnet U and Preuss U, 2017b

Conclusions

- Patients are using cannabis for relief of psychiatric symptoms including anxiety and depressed mood
- Cannabis use not demonstrating efficacy for most, if not all, psych symptoms.
- Frequent use, use at a young age, and use of high potency cannabis—overall associated with worse symptoms for mood disorders and psychotic disorders
- CBD may hold therapeutic effects for anxiety and substance craving, but more evidence is needed
- No pharmacotherapy with particularly strong evidence for treatment of cannabis use disorder or cannabis-related symptoms

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