SUBSTANCE-RELATED AND ADDICTIVE DISORDERS

Cannabis Use Disorder

CUD

DSM-5-TR 304.30/305.20 | ICD-10-CM F12.10, F12.20

Problematic cannabis use with tolerance, withdrawal, and impaired control, rising in prevalence as commercial THC potency increases.

LIFETIME PREVALENCE	TYPICAL ONSET	RISK OF DEPENDENCE	COURSE
~6.3% (US adults)	Adolescence to early 20s	~9%; ~17% if teen onset	Chronic; low treatment entry

CLINICAL PICTURE

- Daily or near-daily use, often beginning on waking, with repeatedly failed cutdown attempts rationalized by the drug's legal status.
- Amotivation, blunted affect, and declining academic or occupational performance are frequent presenting complaints in young adults.
- Withdrawal appears within 1 to 3 days as irritability, anxiety, insomnia, vivid dreams, decreased appetite, sweating, and physical discomfort.
- High-potency concentrates and dabs generate tolerance quickly, so ask about product type and THC percentage rather than frequency alone.
- Cannabinoid hyperemesis presents as cyclic vomiting relieved by hot showers and is frequently misattributed to primary GI disease.
- Acute intoxication brings conjunctival injection, tachycardia, increased appetite, impaired coordination, and distorted time perception.

DIAGNOSTIC CRITERIA AT A GLANCE

- Requires at least 2 of 11 criteria within a 12-month period, with severity graded mild 2-3, moderate 4-5, or severe 6 or more.
- Cannabis withdrawal became a formal DSM-5 diagnosis, requiring 3 or more symptoms within about a week of stopping heavy sustained use.
- Craving was added and legal problems were removed, which matters given widespread state-level legalization across the United States.
- Tolerance and withdrawal do not count toward the diagnosis when cannabis is taken under appropriate medical supervision.
- Cannabis-induced psychotic, anxiety, and sleep disorders are coded separately when symptoms exceed expected intoxication effects.

NEUROBIOLOGY & PHYSIOLOGY

- **THC** is a partial agonist at **CB1** receptors, which are dense in the hippocampus, cerebellum, basal ganglia, and prefrontal cortex.
- Chronic exposure downregulates CB1 receptors, with substantial receptor recovery documented within roughly 4 weeks of abstinence.
- Indirect mesolimbic dopamine release drives reinforcement, although the magnitude is smaller than that seen with stimulants or opioids.
- Adolescent exposure disrupts endocannabinoid-guided synaptic pruning, correlating with lasting attention, memory, and processing deficits.
- Heavy high-potency use roughly triples psychosis risk in a dose-dependent way, with **AKT1** variants and family history moderating susceptibility.
- Heritability runs 50% to 70%, and **CNR1** and **FAAH** variants influence withdrawal severity and the subjective response to intoxication.

PSYCHOLOGICAL MECHANISMS

- Cannabis is commonly used to manage anxiety, insomnia, and boredom, creating negative-reinforcement cycles that worsen the very target symptom.
- Perceived low harm and heavy social normalization delay recognition of impairment and reduce motivation to change use patterns.
- Use suppresses approach to developmental tasks, so functional gains rather than abstinence alone should anchor collaborative treatment goals.
- Peer network and identity effects are strong in adolescence, so family and school involvement outperforms individual work done alone.
- Withdrawal-driven irritability and insomnia in the first two weeks predict relapse, so plan concretely and specifically for that window.

DIFFERENTIAL & COMORBIDITY

- Distinguish cannabis-induced psychosis from a primary psychotic disorder, since persistence beyond a month of abstinence favors the latter.
- Anxiety and depressive disorders are frequently both cause and consequence, so reassess the diagnosis after 4 weeks of reduced use.
- Common comorbidities include tobacco and alcohol use disorders, ADHD, PTSD, and other substance use disorders needing parallel treatment.
- Assess driving safety, occupational hazards, and pregnancy exposure, since prenatal cannabis is linked to lower birth weight.
- Screen with the **CUDIT-R**, and note that synthetic cannabinoid use presents far more severely and requires separate assessment.

Treatment EVIDENCE-BASED MANAGEMENT

PHARMACOLOGIC

- No medication is FDA-approved for cannabis use disorder, so structured behavioral treatment remains the foundation of effective care.
- **N-acetylcysteine 1200 mg BID** showed benefit for abstinence in adolescents but did not replicate in the adult multisite trial.
- **Gabapentin 1200 mg/day** and **dronabinol** have modest trial support, mainly reducing withdrawal symptoms rather than actual use.
- Treat comorbidity on its own merits with agents such as **sertraline** for depression and **CBT-I** rather than sedatives for insomnia.
- Avoid ongoing benzodiazepines for withdrawal anxiety, since symptoms peak at days 2 to 6 and largely resolve within 2 to 3 weeks.

PSYCHOTHERAPY

- **CBT** combined with **motivational enhancement therapy** over 9 to 12 sessions is the best-supported treatment package for adults.
- Adding **contingency management** to combined CBT and MET substantially improves abstinence rates during the active treatment phase.
- **Multidimensional family therapy** and **multisystemic therapy** lead outcomes for adolescents with cannabis use disorder.
- Brief two-session motivational interventions reduce use among non-treatment-seeking young adults and college student populations.
- Effect sizes are modest and end-of-treatment abstinence approaches only 30%, so frame reduction and function as legitimate goals.

ADJUNCT & SUPPORTIVE

- Sleep is the leading relapse driver, so deliver **CBT-I** and set expectations that vivid dreams and insomnia normalize by about week 3.
- Engage school, family, and employer supports for adolescents, since monitoring combined with reinforcement outperforms monitoring alone.
- Apply **ASAM** criteria for level of care, though most patients are managed in outpatient or intensive outpatient settings.
- Track progress with the **CUDIT-R**, timeline followback, and creatinine-corrected quantitative urine THC-COOH ratios.
- Counsel on driving impairment lasting several hours and on the sharply greater potency of concentrates, vapes, and edibles.

CLINICAL PEARLS

- Cannabis withdrawal is real, peaks at days 2 to 6, and drives most early relapse.
- Ask about THC percentage and product type, not just times used per day.
- Psychosis persisting a month after abstinence points to a primary disorder.

References

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). https://doi.org/10.1176/appi.books.9780890425787

Di Forti, M., Quattrone, D., Freeman, T. P., Tripoli, G., Gayer-Anderson, C., Quigley, H., Rodriguez, V., Jongsma, H. E., Ferraro, L., La Cascia, C., La Barbera, D., Tarricone, I., Berardi, D., Szoke, A., Arango, C., Tortelli, A., Velthorst, E., Bernardo, M., Del-Ben, C. M., & Menezes, P. R. (2019). The contribution of cannabis use to variation in the incidence of psychotic disorder across Europe (EU-GEI): A multicentre case-control study. *The Lancet Psychiatry*, *6*(5), 427-436. https://doi.org/10.1016/S2215-0366(19)30048-3

National Academies of Sciences, Engineering, and Medicine. (2017). *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research*. National Academies Press. https://doi.org/10.17226/24625

National Institute on Drug Abuse. (n.d.). *Cannabis (marijuana)*. National Institutes of Health. https://nida.nih.gov/research-topics/cannabis-marijuana

Sadock, B. J., Sadock, V. A., & Ruiz, P. (2021). *Kaplan & Sadock's synopsis of psychiatry* (12th ed.). Wolters Kluwer.

Stahl, S. M. (2021). *Stahl's essential psychopharmacology* (5th ed.). Cambridge University Press.

Substance Abuse and Mental Health Services Administration. (2023). *Key substance use and mental health indicators in the United States: Results from the 2022 National Survey on Drug Use and Health*. https://www.samhsa.gov/data/report/2022-nsduh-annual-national-report

U.S. Department of Veterans Affairs & U.S. Department of Defense. (2021). *VA/DoD clinical practice guideline for the management of substance use disorders*. https://www.healthquality.va.gov/guidelines/MH/sud/

NOTE

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