

References

1. News: November 2024 - UNODC EWA: New evolution of “semi-synthetic” cannabinoids. <https://www.unodc.org/LSS/Announcement/Details/365e48cd-bf2f-4ac5-85d5-85d3530fe797>.

2. EU Drug Market: New psychoactive substances — Distribution and supply in Europe: Semi-synthetic cannabinoids | www.euda.europa.eu. https://www.euda.europa.eu/publications/eu-drug-markets/new-psychoactive-substances/distribution-and-supply/semi-synthetic-cannabinoids_en#source-data.

3. As France bans HHC cannabis alternative, stores rush to sell off stock. (2023).

4. Her 17-year-old daughter is under psychiatric care after becoming addicted to HHC vapes. The Irish Times <https://www.irishtimes.com/opinion/2025/03/02/her-17-year-old-daughter-is-under-psychiatric-care-after-becoming-addicted-to-hhc-vapes/>.

5. Senate approves new restrictions on sale of kratom and cannabis-derivative HHC. Radio Prague International <https://english.radio.cz/senate-approves-new-restrictions-sale-kratom-and-cannabis-derivative-hhc-8831305> (2024).

6. An act to provide for the reform and continuation of agricultural and other programs of the Department of Agriculture through fiscal year 2023, and for other purposes. (2018).

7. United Nations Conference on Trade and Development. Commodities at a Glance: Special Issue on Industrial Hemp. https://unctad.org/system/files/official-document/ditccom2022d1_en.pdf (2022).

8. Wilson-Poe, A. R., Smith, T., Elliott, M. R., Kruger, D. J. & Boehnke, K. F. Past-Year Use Prevalence of Cannabidiol, Cannabigerol, Cannabinol, and Δ8-Tetrahydrocannabinol Among US Adults. JAMA Netw. Open 6, e2347373 (2023).

9. New psychoactive substances – the current situation in Europe (European Drug Report 2024) | www.euda.europa.eu, https://www.euda.europa.eu/publications/european-drug-report/2024/new-psychoactive-substances_en.

10. Harlow, A. F., Miech, R. A. & Leventhal, A. M. Adolescent Δ8-THC and Marijuana Use in the US. JAMA 331, 861–865 (2024).

11. Livne, O. et al. Delta-8 THC use in US adults: Sociodemographic characteristics and correlates. Addict. Behav. 133, 107374 (2022).

12. Patrick, M. E., Miech, R. A., Pang, Y. C., Leventhal, A. M. & Harlow, A. F. Use of Delta-8-THC and Other Types of Cannabis Among Young Adults in the U.S. Am. J. Prev. Med. 0, (2025).

13. Livingston, M. D., Walker, A., Cannell, M. B. & Rossheim, M. E. Popularity of Delta-8 THC on the Internet Across US States, 2021. Am. J. Public Health 112, 296–299 (2022).

14. Leas, E. C., Nobles, A. L., Shi, Y. & Hendrickson, E. Public interest in Δ8-Tetrahydrocannabinol (delta-8-THC) increased in US states that restricted Δ9-Tetrahydrocannabinol (delta-9-THC) use. Int. J. Drug Policy 101, 103557 (2022).

15. Smith, G. A. et al. Delta-8 Tetrahydrocannabinol Exposures Reported to US Poison Centers: Variations Among US States and Regions and Associations with Public Policy. J. Med. Toxicol. 20, 389–400 (2024).

16. Labadie, M. et al. Hexahydrocannabinol poisoning reported to French poison centres. Clin. Toxicol. 62, 112–119 (2024).

17. Thomsen, R. et al. Prolonged sedation and unconsciousness after intoxication with the novel semisynthetic cannabinoid hexahydrocannabioctyl (HHC-C8): Two case descriptions. Toxicol. Rep. 14, 101912 (2025).

18. Iketani, Y. et al. A Case of Acute Intoxication from Sublingually Administering a Liquid Inhalation Product Containing a Marijuana Analogue.

19. Leas, E. C. et al. Self-reported adverse events associated with Δ⁸-Tetrahydrocannabinol (Delta-8-THC) Use. J. Cannabis Res. 5, 15 (2023).

20. Miller, C. R., Burk, B. G., Fargason, R. E. & Birur, B. Delta-8-THC association with psychosis: A case report with literature review. Front. Psychiatry 14, (2023).

21. Singh, H., Garg, R. & Tampi, R. Psychiatric Manifestations of Delta-8-Tetrahydrocannabinol (Δ8-THC) Use Among Patients With Preexisting Psychiatric Disorders: A Case Series. Cureus (2025) doi:10.7759/cureus.79621.

22. Holt, A. K., Poklis, J. L. & Peace, M. R. Δ8-THC, THC-O Acetates and CBD-di-O Acetate: Emerging Synthetic Cannabinoids Found in Commercially Sold Plant Material and Gummy Edibles. J. Anal. Toxicol. 46, 940–948 (2022).

23. Greer, D., Atherton, J. & Girgis, J. Psychosis and suicide attempt following a single use of delta-9-tetrahydrocannabiphorol: A case report. PCN Rep. Psychiatry Clin. Neurosci. 4, e70060 (2025).

24. O'Mahony, B., O'Malley, A., Kerrigan, O. & McDonald, C. HHC-induced psychosis: a case series of psychotic illness triggered by a widely available semisynthetic cannabinoid. Ir. J. Psychol. Med. 41, 405–408 (2024).

25. Marzolla, M., Menga ,Angela, Romeo ,Francesca & and Gatti, R. The dark side of “legal highs”: a case of psychosis in polysubstance use—A young psychonaut’s perspective. J. Subst. Use 0, 1–6.

26. Casadio, P., Fernandes, C., Murray, R. M. & Di Forti, M. Cannabis use in young people: The risk for schizophrenia. Neurosci. Biobehav. Rev. 35, 1779–1787 (2011).

27. Ujváry, I. Hexahydrocannabinol and closely related semi-synthetic cannabinoids: A comprehensive review. Drug Test. Anal. 16, 127–161 (2024).

28. Spindle, T. R. et al. A within-subject cross-over trial comparing the acute effects of vaporized delta-8-tetrahydrocannabinol and delta-9-tetrahydrocannabinol in healthy adults. Drug Alcohol Depend. 272, 112684 (2025).

29. Marusich, J. A., Prioleau, C. & Akinfiresoye, L. R. Cannabimimetic and discriminative stimulus effects of hexahydrocannabinols in mice. J. Psychopharmacol. Oxf. Engl. 2698811251330739 (2025) doi:10.1177/02698811251330739.

30. Lucuta, L. et al. Inhalation and oral administration of HHC products – Quantification of (9R)-, (9S)-Hexahydrocannabinol and metabolites in plasma and detectability in on-site drug tests for urine and oral fluid. Forensic Sci. Int. 370, 112437 (2025).

31. Hemp Advancement Act of 2022. (2022).

32. Office of the Attorney General. Criminal Justice (Psychoactive Substances) Act 2010.

33. Home Office. Psychoactive Substances Act 2016.

34. Review of the Psychoactive Substances Act 2016. (Home Office, London, 2018).

35. Humphries, C. The United Kingdom’s Psychoactive Substances Act 2016. Where are we now? Drug Sci. Policy Law 8, 20503245221138735 (2022).

36. Ralphs, R., Gray, P. & Sutcliffe, O. B. The impact of the 2016 Psychoactive Substances Act on synthetic cannabinoid use within the homeless population: Markets, content and user harms. Int. J. Drug Policy 97, 103305 (2021).

37. Interactive, E. What substances will be regulated by the psychomodulation law and what about CBD? ARROWS, law firm. Legal services quickly and globally <https://www.arws.cz/news-at-arrows/what-substances-will-be-regulated-by-the-psychomodulation-law-and-what-about-cbd>.

38. Mravčík, V. et al. Psychomodulatory substances: New legislative framework for control of psychoactive substances in Czechia. Int. J. Drug Policy 133, 104603 (2024).