



PENS

MYTHS & REALITIES

MYTH: Vape pens produce a harmless water vapor.

REALITY: Vape pens produce an aerosol that can **contain nicotine, toxins, and other harmful chemicals known to cause cancer.** These chemicals and toxins include things like Formaldehyde Lead, and Nickel.^{1, 2}

MYTH: Vape pens are not addictive.

REALITY: Nicotine is one of the main ingredients in vape pens and is a highly addictive poison.³ **Youth who vape are 4x more likely to start smoking cigarettes than teens that don't vape.**⁴ Pens that contain THC wax are also addictive. Young people who begin using marijuana before the age of 18 are up to 7x more likely than adults to become addicted.⁵

**Free help quitting at
kikitca.org**

MYTH: It is safer to use a pen to vape THC than to smoke marijuana.

REALITY: Using a pen to vaporize marijuana can lead to **toxic levels of ammonia being released in the vapor.** Ammonia is also commonly found in cigarettes. This can cause lung irritation, asthma attacks, and impact your nervous system.⁶

MYTH: Recreational use of a vape pen is safe and not addictive.

REALITY: Any exposure to nicotine and THC can be dangerous for a young person's brain development. Nicotine use negatively impacts learning, memory, and attention.⁷ THC use has been linked to lower IQ scores, poor memory and attention, and decreased brain connections.⁸ **Recreational use is not daily use! Even occasional use of a vape pen can lead to an increased risk for long-term nicotine and THC addiction.**⁹

1. Goniewicz, M.L., et al. (2013). Levels of selected carcinogens and toxicants in vapour from electronic cigarettes. *Tobacco Control*, 23;133-139.
2. William, M., Villarreal, A., Bozhilov, K., Lin, S., & Talbot, P. (2013). Metal and silicate particles including nanoparticles are present in electronic cartomizer fluid and aerosol: *Electronic Cigarettes*.
3. National Institute on Drug Abuse. (2012). Is Nicotine Addictive? Retrieved from <http://www.drugabuse.gov/publications/research-reports/tobacco/nicotine-addictive>.
4. Berry, KM, et al. (2019). Association of Electronic Cigarette Use with Subsequent Initiation of Tobacco Cigarettes in US Youths. *JAMA Network Open*, 2(2), published online February 1, 2019.
5. U.S. Department of Health & Human Services, Office of Adolescent Health (2019). Risks of Adolescent Marijuana Use. Retrieved from: <https://www.hhs.gov/ash/oah/adolescent-development/substance-use/marijuana/risks/index.html>
6. Colorado Department of Public Health and Environment (2019). FAQs: Marijuana and Methods of Use. Retrieved from: https://www.colorado.gov/pacific/sites/default/files/M_RM_Marijuana-and-Methods-of-Use-FAQs.pdf
7. Office of the Surgeon General. (2018). Surgeon General's Advisory on E-cigarette Use Among Youth. Retrieved from <https://e-cigarettes.surgeongeneral.gov/documents/surgeon-generals-advisory-on-e-cigarette-use-among-youth-2018.pdf>.
8. National Institute on Drug Abuse. (2019) What are Marijuana's long-term effects on the brain? Cited by U.S. Department of Health & Human Services, Office of Adolescent Health (2019). Risks of Adolescent Marijuana Use. Retrieved from: <https://www.hhs.gov/ash/oah/adolescent-development/substance-use/marijuana/risks/index.html>
9. Budney, A., Sargent, J., Lee D. (2015) Vaping Cannabis (marijuana): Parallel Concerns to e-cigs? *Addiction*. Vol. 110, Issue 11.