

# PUBLIC HEALTH & SAFETY ADVISORY ON CANNABIS, INCLUDING MARIJUANA AND HEMP

## ADVISORY ON HUMAN USE OF PRODUCTS DERIVED FROM CANNABIS

Issued September 27, 2018

The Tennessee Department of Health, Tennessee Department of Mental Health and Substance Abuse Services, Tennessee Department of Safety & Homeland Security and the Tennessee Bureau of Investigation urge Tennesseans to have heightened awareness about the use of products derived from Cannabis, including marijuana and hemp, and the risks of harm associated with such products claiming to benefit health.

1. Marijuana is addictive. Approximately one in eleven individuals who use marijuana will become addicted. The risk is greater in youth. One in six teenagers who use marijuana will become addicted, and the risk for developing a marijuana substance use disorder further increases for those who use marijuana frequently.<sup>1</sup>

In 2017, there were 2,182 admissions to state-funded substance use treatment services in Tennessee with marijuana as the primary substance (more than heroin or cocaine).<sup>2</sup>

2. Today's marijuana is more potent than before. Tetrahydrocannabinol, or THC, is the primary psychoactive substance found in Cannabis. Analysis of samples confiscated by the United States Drug Enforcement Administration showed a three-fold increase from approximately four percent THC in 1995 to approximately 12 percent THC in 2014.<sup>3</sup>

Marijuana products can now be found with THC concentrations exceeding 20 percent.<sup>4</sup> The long-term health or developmental consequences of exposure to these high concentrations of marijuana are unknown.

3. Marijuana use is associated with a number of adverse health outcomes. A comprehensive review by the National Academies in 2017 found that marijuana use is associated with the development of psychoses (like schizophrenia) and an increased risk of motor vehicle crashes.<sup>5</sup>
4. Marijuana is particularly harmful to the developing child. Smoking marijuana during pregnancy is associated with being born at low birth weight, which is a risk factor for death in the first year of life. In a September 2018 clinical report, the American Academy of Pediatrics recommends that *"marijuana should not be used during pregnancy."*<sup>6</sup>

In 2017, the American Academy of Child and Adolescent Psychiatry warned that marijuana impacts the developing brain, even beyond early childhood. They note that *"heavy use during adolescence is associated with increased incidence and worsened course of psychotic, mood, anxiety, and substance use disorders."* They also cite longer-term complications of marijuana use, including *"increased risk of motor vehicle accidents, sexual victimization, academic failure, lasting decline in intelligence measures, psychopathology, addiction, and psychosocial and occupational impairment."*<sup>7</sup>

5. There are a limited number of conditions where the medical literature shows substantial or conclusive evidence for using Cannabis-derived medications<sup>5,8,9</sup>:
  - a. nausea and vomiting resulting from chemotherapy
  - b. spasticity in patients with multiple sclerosis, and
  - c. chronic neuropathic pain.

Outside of these conditions, there is not sufficient evidence to show that any forms of Cannabis, including marijuana and hemp, are safe and effective as medications.

6. FDA-approved medications that are derived from Cannabis are already available to Tennesseans and available by prescription for patients under the care of a health care provider. These include:
  - a. Cannabidiol (Epidiolex®)<sup>10</sup>
  - b. Dronabinol (Marinol® and Syndros®)<sup>11</sup>
  - c. Nabilone (Cesamet®)<sup>12</sup>
7. The FDA works to assure that medications are safe and effective. Even medications that have gone through an FDA approval process and are manufactured at pharmaceutical grade can have risk associated with their use, but the testing and approval process allows those risks to be known. This allows healthcare professionals to talk with patients about the risks and benefits of a particular medication. The safety and efficacy of untested, non-FDA approved products remain unknown.
8. Marijuana impairs judgment and can lead to actions that result in death. These include motor vehicle crashes, falls, and other deaths including those resulting from actions performed with impaired judgment. While marijuana may not directly result in death in the same way as other drugs, there are unfortunately many instances where marijuana intoxication has led to death.<sup>5,13,14,15,16</sup>

**Given the current evidence, known harms, and many unknowns, this advisory is provided to Tennesseans as a caution regarding health risks of Cannabis. Making an addictive substance more widely available for conditions for which it has not been shown to be safe and effective creates an undue risk to public health.**

## REFERENCES

- <sup>1</sup> Volkow ND, Baler RD, Compton WM, Weiss SRB. Adverse health effects of marijuana use. *New England Journal of Medicine*. 2014; 370: 2219-27.
- <sup>2</sup> Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS through July 1, 2018. [www.dasis.samhsa.gov/webt/quicklink/TN17.htm](http://www.dasis.samhsa.gov/webt/quicklink/TN17.htm).
- <sup>3</sup> ElSohly MA, Mehmedic Z, Foster S, Gon C, Chandra S, Church JC. Changes in Cannabis Potency over the Last Two Decades (1995-2014) - Analysis of Current Data in the United States. *Biol Psychiatry*. 2016 April 1; 79(7): 613-619
- <sup>4</sup> Jikomes N, Zoorob M. The cannabinoid content of legal cannabis in Washington State varies systematically across testing facilities and popular consumer products. *Nature*. 2018; 8:4519. <https://www.nature.com/articles/s41598-018-22755-2>
- <sup>5</sup> National Academies of Sciences, Engineering, and Medicine. 2017. The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research. Washington, DC: The National Academies Press. doi: 10.17226/24625.
- <sup>6</sup> Ryan SA, Ammerman SD, O'Conner ME, AAP COMMITTEE ON SUBSTANCE USE AND PREVENTION, AAP SECTION ON BREASTFEEDING. Marijuana Use During Pregnancy and Breastfeeding: Implications for Neonatal and Childhood Outcomes. *Pediatrics*. 2018; 142(3): e20181889.

- 
- <sup>7</sup> American Academy of Child and Adolescent Psychiatry. Policy Statement: Marijuana Legalization. 2017. [www.aacap.org/AACAP/Policy\\_Statements/2014/AACAP\\_Marijuana\\_Legalization\\_Policy.aspx](http://www.aacap.org/AACAP/Policy_Statements/2014/AACAP_Marijuana_Legalization_Policy.aspx)
- <sup>8</sup> Nugent SM, Morasco BJ, et al. The effects of cannabis among adults with chronic pain and an overview of general harms: a systematic review. *Annals of Internal Medicine*. 2017; 167(5): 319-31.
- <sup>9</sup> Kansagara D, O'Neil M, Nugent S, et al. Benefits and Harms of Cannabis in Chronic Pain or Post-traumatic Stress Disorder: A Systematic Review [Internet]. Washington (DC): Department of Veterans Affairs (US); 2017 Aug.
- <sup>10</sup> United States Food and Drug Administration. Epidiolex FDA Approval Letter. [www.accessdata.fda.gov/drugsatfda\\_docs/nda/2018/210365Orig1s000Approv.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/nda/2018/210365Orig1s000Approv.pdf)
- <sup>11</sup> United States Food and Drug Administration. Syndros FDA Approval Letter. [www.accessdata.fda.gov/drugsatfda\\_docs/applletter/2016/205525Orig1s000ltr.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/applletter/2016/205525Orig1s000ltr.pdf)
- <sup>12</sup> United States Food and Drug Administration. Cesamet FDA Drug Label. [www.accessdata.fda.gov/drugsatfda\\_docs/label/2006/018677s011lbl.pdf](http://www.accessdata.fda.gov/drugsatfda_docs/label/2006/018677s011lbl.pdf)
- <sup>13</sup> Hancock-Allen JB, Barker L, VanDyke M, Holmes DB. Notes from the Field: Death Following Ingestion of an Edible Marijuana Product—Colorado March 2014. *CDC Morbidity and Mortality Weekly Report*. July 24, 2015. 64(28): 771-772.
- <sup>14</sup> [www.cbsnews.com/news/two-denver-deaths-tied-to-recreational-marijuana-use](http://www.cbsnews.com/news/two-denver-deaths-tied-to-recreational-marijuana-use)
- <sup>15</sup> [www.timescall.com/news/crime/ci\\_30185142/driver-accused-killing-longmont-girl-bike-thought-hed](http://www.timescall.com/news/crime/ci_30185142/driver-accused-killing-longmont-girl-bike-thought-hed)
- <sup>16</sup> Rocky Mountain HIDTA Strategic Intelligence Unit. The Legalization of Marijuana in Colorado: The Impact Volume 5. October 2017. [www.rmhidta.org/html/FINAL%202017%20Legalization%20of%20Marijuana%20in%20Colorado%20The%20Impact.pdf](http://www.rmhidta.org/html/FINAL%202017%20Legalization%20of%20Marijuana%20in%20Colorado%20The%20Impact.pdf)