The Department of Justice's proposed transfer of marijuana from Schedule I to Schedule III of the Controlled Substances Act will facilitate research on the cardiovascular impacts of cannabis use

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We support the Department of Justice proposal to transfer "marijuana" (we prefer to use the term "cannabis") from Schedule I to Schedule III of the Controlled Substances Act, based on the view that cannabis has a currently accepted medical use and has a low to moderate abuse potential and level of physical or psychological dependence. The current assignment of cannabis to Schedule I makes it exceptionally difficult to conduct meaningful medical research of the health effects (both positive and negative) of cannabis use.[1] ***This situation allows unsubstantiated health claims for cannabis use to go unchallenged and makes it exceptionally difficult to study the health effects of cannabis. This evidence vacuum only supports widespread use of cannabis without members of the public and health professionals fully understanding its health effects.***

As medical professionals and health researchers at the University of California, San Francisco with experience treating patients as well as researching the health impacts of cannabis, we are all interested in improving health care delivery and in clinical outcomes research. Dr. Keyhani, the lead author of this comment, is a primary care provider and UCSF investigator based in the San Francisco VA Health Care System who is currently leading multiple VA and NIH funded cohort studies examining the health effects of cannabis. Based on our experiences

[1] Bowling CM, Hafez AY, Glantz SA. Public Health and Medicine's Need to Respond to Cannabis Commercialization in the United States: A Commentary. J Psychoactive Drugs. 2020 Sep-Oct;52(4):377-382. doi: 10.1080/02791072.2020.1761040. Epub 2020 May 19. PMID: 32429772; PMCID: PMC7674246.

and research, we believe that the transfer of cannabis from Schedule I to Schedule III will have public health benefits. There are many research gaps caused by our inability to conduct clinical trials under the current situation in which cannabis is on Schedule I. In addition, as the proposed rescheduling would continue to limit researchers' ability to conduct studies with products available in states that have passed adult use cannabis laws, we ask that the DEA take steps to increase the availability and diversity of research grade cannabis products, including allowing researchers to access cannabis products that are available to be sold directly to consumers.

For example, based on currently available scientific evidence, we believe it is essential that DEA and DOJ consider the possible cardiovascular health impacts of cannabis use and abuse.

Our research into the health impacts of cannabis has shown that cannabis use may lead to cardiovascular impacts

In our February 2024 study[2] examining the association between cannabis use and cardiovascular outcomes among the general population, among never-tobacco smokers, and among younger individuals, we found that cannabis use is associated with adverse cardiovascular outcomes, including with stroke and myocardial infarction. More frequent use (more days per month) is associated with higher risks. These associations were noted both in a general population sample of US adults and among a sample of adults who never used tobacco. Based on these results, the study concluded that cannabis has strong, statistically significant associations with adverse cardiovascular outcomes *independent of tobacco use* and controlling for a range of demographic factors and outcomes. Therefore, the data suggest that cannabis use may be a risk factor for cardiovascular disease and may be a risk factor for premature cardiovascular disease.

[2] Jeffers AM, Glantz S, Byers AL, Keyhani S. Association of Cannabis Use with Cardiovascular outcomes among US adults. Journal of the American Heart Association. 2024 Mar 5;13(5):e030178.

These potential risks are especially concerning given the declining perception of risk associated with cannabis use.

An earlier systematic review examining the acute cardiovascular effects of cannabis outside of its psychoactive effects found that cannabis use is also associated with tachycardia.[3] And a 2020 Scientific Statement from the American Heart Association urged policymakers to consider adverse cardiovascular health implications associated with cannabis along with potential therapeutic possibilities when evaluating its safety and efficacy profile.[4]

There are several gaps in our understanding of how potency and forms of use effect the cardiovascular risks associated with cannabis use. Smoking particulate matter has known cardiovascular risks.[5] How cannabis potency impacts cardiovascular risk is unknown. However, higher potency cannabis is associated with higher risks of addiction and the development of cannabis use disorder.[6] Given the association of cannabis use with myocardial infarction and stroke, increasing cannabis use and cannabis use disorder may have significant impacts on the burden of cardiovascular disease among the US population.[7] The form (e.g., inhaled versus edible use) and the tetrahydrocannabinol content of cannabis products may affect the health risks of cannabis use.

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[3] Ghasemiesfe M, Ravi D, Casino T, Korenstein D, Keyhani S. Acute Cardiovascular Effects of Marijuana Use. J Gen Intern Med. 2020 Mar;35(3):969-974. doi: 10.1007/s11606-019-05235-9. Epub 2019 Aug 13. PMID: 31407239; PMCID: PMC7080887.

[4] Page RL, Allen LA, Kloner RA, Carriker CR, Martel C, Morris AA, Piano MR, Rana JS, Saucedo JF. Medical marijuana, recreational cannabis, and cardiovascular health: a scientific statement from the American Heart Association. Circulation. 2020 Sep 8;142(10):e131-52.

[5] Pope CA 3rd, Burnett RT, Thurston GD, Thun MJ, Calle EE, Krewski D, Godleski JJ. Cardiovascular mortality and long-term exposure to particulate air pollution: epidemiological evidence of general pathophysiological pathways of disease. Circulation. 2004 Jan 6;109(1):71-7. doi: 10.1161/01.CIR.0000108927.80044.7F. Epub 2003 Dec 15. PMID: 14676145.

[6] Petrilli K, Ofori S, Hines L, Taylor G, Adams S, Freeman TP. Association of cannabis potency with mental ill health and addiction: a systematic review. Lancet Psychiatry. 2022 Sep;9(9):736-750. doi: 10.1016/S2215-0366(22)00161-4. Epub 2022 Jul 25. PMID: 35901795.

[7] Leung J, Chan GCK, Hides L, Hall WD. What is the prevalence and risk of cannabis use disorders among people who use cannabis? a systematic review and meta-analysis. Addict Behav. 2020 Oct;109:106479. doi: 10.1016/j.addbeh.2020.106479. Epub 2020 May 20. PMID: 32485547.

Rescheduling cannabis to Schedule III and allowing researchers to obtain research funding and to access and study cannabis products available to consumers will facilitate research to answer these and other important questions.