The Journal of the American Osteopathic Association


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Letters must be submitted online at http://www.osteopathic.org/JAOAsubmit and not have been published elsewhere. All accepted letters to the editor are subject to editing and abridgment.

## Contemporary Routes of Cannabis Consumption

To the Editor:

I would first like to commend Peters and Chien[1] on the concise information they provided regarding the modalities, forms, and dosing of cannabis in their February 2018 article on cannabis.[1] I agree with the authors that cannabis use will become even more omnipresent in medicine than it already is. However, I strongly disagree and even refute their statement that "Physicians have little reason to advocate for cannabis use, as data are limited on its beneficial effects."[1]

I am a cannabis clinician in Ohio, which means that I have a certificate to recommend medical marijuana in the state. Medical marijuana legislation was passed in Ohio in 2016, and the state is currently in the early stages of rollout: patient registries opened December 2018, in-state grown cannabis greenhouses have cultivated their first harvests, and the first dispensaries opened in February 2019.[2] It is a very exciting time for cannabis in Ohio, so I was disheartened when this article came across my desk.

I agree that there is limited evidence-based literature regarding cannabis currently, but existing data coupled with current ongoing research are more than positive. The National Institutes of Health have been funding Israeli cannabis research since the early 1960s.[3]

In a 2018 review, Tashkin[4] concluded that smoking marijuana habitually did not increase the likelihood of lung cancer, possibly because of the immunoprotectant properties of cannabis. Additionally, evidence[4] has shown that cannabis is a safer alternative to opioids; in the face of the ongoing opioid epidemic, this news is welcoming. Cannabis has also been shown to be beneficial in acute opioid withdrawal and as a harm reduction tool in opioid use disorder.[5] Furthermore, in June 2018, Epidiolex (GW Pharmaceuticals plc) was the first drug approved by the Food and Drug Administration that contains a purified substance derived from cannabis to treat patients with seizures associated with Lennox-Gastaut and Dravet syndromes.[6]

The evidence is growing, but we must be vigilant in our search and not be blinded by long-antiquated societal views. Yes, clinicians will have the challenge of keeping up with the ever-evolving use of cannabis, both medically and recreationally, but this challenge is one I gladly accept. (doi:10.7556/jaoa.2019.087)

**Julianne Moy, DO**
Cannabis Clinician, Ohio Marijuana Card, Dublin, Ohio

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## Response

We thank Dr Moy for taking her time to read and respond to our February 2018 article on the routes of cannabis consumption.[1] We agree that the United States is in a watershed moment for cannabis with regard to its legalization and potential medical applications.

Although many studies have suggested potential benefits from cannabis, positive outcomes do not necessarily equate to efficacious treatments for human patients. For example, Abraxane (Celgene Corporation) was derived from the yew tree, but we do not prescribe

yew tree teas for cancer patients. Instead, a compound in the yew tree was isolated, purified, and studied in randomized controlled studies. Doses, adverse effects, and potential mechanisms of action were identified, leading to the development of a medication that can be carefully prescribed.[2] Regarding the quality of available evidence on cannabis, in the systematic review by Whiting et al,[3] only 4 of 79 trials were determined to have a low risk for bias, and many did not reach statistical significance. Better studies are needed.

We are encouraged by new cannabis-derived medications such as Epidiolex for the management of seizures, and we often point to Marinol (dronabinol, tetrahydrocannabinol; AbbVie Inc.) for the management of nausea and vomiting caused by chemotherapy as proof that cannabis-derived products can be used to improve patient care. We are also hopeful that cannabis might be used as a safer alternative to opioids; a cannabis-derived pain medication would be a significant boon. Olfson et al,[4] however, found that cannabis use was associated with *increased* nonprescription opioid use and opioid use disorder.

Herbal cannabis is not a consistent product. Studies[5,6] have demonstrated that a specific plant's cannabinoid and terpene profile can shift based on soil, nutrients, light cycle, water, and grow location. The cannabis used in a specific study is unlikely to be equivalent to the cannabis found in local shops or grown in backyards. We believe the active components of cannabis should be identified, purified, and studied, as they were with the yew tree, so that physicians can prescribe medications with known doses and a clear understanding of the mechanisms of action and potential adverse effects.

We are not promoting antiquated biases against cannabis; rather, we suggest that modern medicine requires the development of a standardized cannabis product (be it a standardized herbal product, purified compound, or something in between) to allow for nonbiased, randomized controlled studies. This process would pave the way for stronger medical evidence and safer prescribing. (doi:10.7556/jaoa.2019.088)

**Jeramy Peters, DO**

**Joseph Chien, DO**

Department of Psychiatry, Oregon Health and Science University, Portland

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