THE HAWAI'I STATE DEPARTMENT OF HEALTH OFFICE OF MEDICAL CANNABIS CONTROL & REGULATION | August 2024

# HAWAI'I MEDICAL CANNABIS NEWSLETTER

#### The Science

# What are the different ways to use medical cannabis?

Medical cannabis products have changed a lot over time. They are now stronger and come in different forms. You can use medical cannabis in many ways, and each way works differently. Some ways work faster or last longer than others, affecting each person differently. Let's look at the different ways you can use medical cannabis.





- **Description:** Products you eat or drink
- **Products:** Gummies, tinctures, chocolate, tablets, RSO oil, and beverages
- The effects of eating cannabis last longer and provide extended relief for certain symptoms.
- Because of delayed effects, patients can unintentionally consume too much and experience unpleasant effects.
- Edibles may feel stronger and take longer to feel. This is because when you eat cannabis, your liver turns THC into a different compound that is more potent than THC.<sup>1</sup>

- Always check the amount of THC on the label. Edibles can look the same but have different strengths. You may need to cut edibles in half or quarters to consume the dose you want.
- Talk to your healthcare provider if you have liver disease. Studies on edible CBD show that high doses can cause liver damage and interact with other medications.<sup>2</sup>

#### **Sublingual absorption**



 If you want faster effects from edible products, an option is to use sublingual products. These involve placing product material under your tongue, which allows cannabinoids to enter your bloodstream faster. For best sublingual absorption look for alcohol-based tinctures or sprays.



# INHALATION

Smoking is hazardous to your health



#### **Dry Herb Vaporizers**





- **Description:** Devices that use dry cannabis flower plus heat to vaporize cannabinoids and terpenes
- **Products:** Handheld dry herb vaporizers and larger tabletop devices. These devices are not yet sold in Hawai'i dispensaries.
- Quick onset for immediate relief of certain symptoms. Also, less flower is needed for the same effect as smoking.
- It is thought to be the safest method to inhale cannabis. The heating process does not destroy or burn the cannabinoids and terpenes.<sup>3</sup>
- Vaporizers can be costly. They can be difficult for some patients to grasp and load with flower.
- These products let you control the temperature, so you can activate certain cannabinoids and terpenes to get the effect you want.<sup>4</sup>

### Vaporizer Cartridges



- **Description:** Vape pens or cartridges filled with cannabis oil or distillate. The battery and atomizer heat up the oil and turn it into vapor that you can inhale.
- Quick onset for immediate relief of certain symptoms. Less smell than smoking flower.
- Cartridges are not proven to be safe.
- Look for hardware with heating elements made from safe materials like glass, ceramic, or stainless steel, not plastic or rubber. The cartridge should only contain cannabis, cannabis oils, or cannabis extracts. Residual solvents and added terpenes may not be safe to inhale. Check with the dispensary for a complete list of cartridge ingredients and extraction method used.

### **Dried Flower**



- **Description:** Using fire to burn dry cannabis flower so you can inhale the smoke
- Products: Flower, pre-rolls
- Quick onset for immediate relief of certain symptoms. Effects often felt within a few seconds.
- Cannabis smoke contains carcinogens, tars, and carbon monoxide. This may irritate your lungs and lead to a daily cough, increased mucus, and a higher risk of lung infection for frequent users.<sup>5</sup>

#### Concentrates



- **Description:** Extracted cannabis products that are **extremely potent** and contain high levels of active ingredients from the plant.
- **Products:** Sugar wax, shatter, diamonds, rosin, crumble, badder
- Quick onset for immediate relief of certain symptoms.
- Less product is needed for the same effect as other smoking products.
- Rapid intoxication.
- Concentrates may raise your tolerance of cannabis.

#### LOCAL ADMINSTRATION

## Topicals

- Description: Products applied to your skin
- **Products:** Lotion, cream, balm, oil, salve, transdermal patches
- Great for local pain relief, joint soreness, and many skin conditions.<sup>6</sup>
- Topicals are non-intoxicating unless labeled transdermal.
- May contain other ingredients that cause skin irritation.
- Topicals work by interacting with CB1 and CB2 receptors found in the skin, reducing inflammation and pain.<sup>7</sup>



#### Transdermal products

 Some topicals have ingredients that help cannabinoids penetrate through the skin and enter the bloodstream. Transdermal products with THC can be intoxicating and might make you feel high.<sup>7</sup>

## Suppositories

- Description: Products placed in the rectum or vaginal cavity
- Products: Not yet sold in Hawai'i dispensaries
- They don't usually make you feel "high" like other cannabis products. This may allow some patients to take higher doses without intoxication.<sup>8</sup>
- Some patients feel discomfort when applying.
- Suppositories help patients who have trouble using other products because of severe vomiting, nausea, and difficulty swallowing.<sup>9</sup> They may also help with female reproductive health issues, such as endometriosis.<sup>10</sup>

#### COMPARISON OF ROUTES OF ADMINSTRATION

METHOD	ORAL	SUBLINGUAL	TOPICAL	TRANSDERMAL	SUPPOSITORIES	SMOKING
ONSET	30 minutes to over 2 hours	1-2 minutes	Seconds to 30 minutes	15 to 30 minutes	Seconds to 10 minutes	Seconds to 10 minutes
DURATION	Up to 12 hours	1-2 hours	Variable	Variable	Up to 12 hours	1 to 4 hours

#### THINGS TO CONSIDER WHEN USING MEDICAL CANNABIS

- If you are new to cannabis, start with a low dose or microdose. This means taking small amounts of THC, less than 2.5 mg. This can provide the benefits of cannabis without feeling too high or having unpleasant side effects the 'start low, go slow' suggestion.<sup>11</sup>
- Dosing is different for everyone, always talk to your healthcare provider about dosing, titration and what route is best for you.
- Be aware of possible side effects. Large doses of THC can cause anxiety, paranoia, confusion, falls, dizziness, imbalance, nausea, vomiting, impaired driving, and dependence. THC can increase heart rate, so kupuna and those with heart problems should be mindful.<sup>12</sup>
- There is evidence that high-concentration THC cannabis products are associated with adverse mental health outcomes for those with preexisting mental health conditions.<sup>13</sup>
- Long-term use can lead to **cannabinoid hyperemesis syndrome (CHS)**, which causes regular cycles of severe nausea, vomiting, and dehydration. The most successful management is to stop using cannabis, but other treatments also show symptom relief, like hot baths and showers or topical capsaicin cream.<sup>14</sup> Seek medical attention if you have severe symptoms.



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### **ASK MALIA**

Malia, do you have any advice on what to do if I'm feeling unpleasant effects from taking too much cannabis? Mahalo, Lina

Aloha Lina, here are some things you can do to feel better:

**Stay calm and comfortable.** Find a quiet, safe space to relax. Dim the lights and reduce noise. Remind yourself, unlike opioids, an overdose of cannabis is not fatal.

**Use grounding techniques.** Apply deep breathing, count backward, or hold a comforting object.

**Hydrate and eat.** Drink water or eat something light to help stabilize blood sugar levels.

**Change your setting.** Move to a more familiar, comfortable environment to help reduce anxiety. Be around supportive friends or family members that can provide comfort.

At any time, you feel like you are having a medical emergency, call 911 or have someone take you to the nearest emergency facility.

Accidental ingestion by keiki is a medical emergency.

## HAWAI'I STATE LAW

Guidance for staying compliant while transporting medical cannabis and driving

Patients or qualifying caregivers may transport medical cannabis, but they need to ensure to follow <u>Hawaii Revised Statute 329-122</u> which states that medical cannabis:

- Must always remain in a sealed container while in a public place
- Not be visible in public
- Not be consumed in public
- May NOT be transported inter-island or to the continent

We can all do our part and use medical cannabis responsibly by not driving while under the influence. Driving after cannabis exposure doubles the crash risk.<sup>15</sup> Studies have concluded that cannabis impairs important skills required for safe driving by:

- Slowing our reaction time and ability to make decisions
- Impairing coordination
- Distorting perception

Having a 329 card does not protect you from being cited with driving under the influence (DUI) or operating a vehicle under the influence of an intoxicant (OVUII). Ensure you are not impaired or feeling high before driving.



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# REFERENCES

1. Huestis M. Pharmacokinetics and Metabolism of the Plant Cannabinoids,  $\Delta$  9-Tetrahydrocannibinol, Cannabidiol and Cannabinol. Handbook of experimental pharmacology 2005; 168: 657-90.

2. National Institute of D, Digestive, Kidney D. LiverTox : clinical and research information on drug-induced liver injury. Bethesda, MD: National Institute of Diabetes and Digestive and Kidney Diseases; 2012.

3. Chaiton M, Kundu A, Rueda S, Di Ciano P. Are vaporizers a lower-risk alternative to smoking cannabis? Can J Public Health 2022; 113(2): 293-6.

4. Eyal AM, Berneman Zeitouni D, Tal D, Schlesinger D, Davidson EM, Raz N. Vapor Pressure, Vaping, and Corrections to Misconceptions Related to Medical Cannabis' Active Pharmaceutical Ingredients' Physical Properties and Compositions. Cannabis Cannabinoid Res 2023; 8(3): 414-25.

5. Preteroti M, Wilson ET, Eidelman DH, Baglole CJ. Modulation of pulmonary immune function by inhaled cannabis products and consequences for lung disease. Respiratory Research 2023; 24(1): 95.

6. Makhakhe L. Topical cannabidiol (CBD) in skin pathology - A comprehensive review and prospects for new therapeutic opportunities. S Afr Fam Pract (2004) 2022; 64(1): e1-e4.

7. Filipiuc SI, Neagu AN, Uritu CM, et al. The Skin and Natural Cannabinoids-Topical and Transdermal Applications. Pharmaceuticals (Basel) 2023; 16(7).

8. Mahmoudinoodezh H, Telukutla SR, Bhangu SK, Bachari A, Cavalieri F, Mantri N. The Transdermal Delivery of Therapeutic Cannabinoids. Pharmaceutics 2022; 14(2).

9. ElSohly MA, Gul W, Walker LA. Pharmacokinetics and Tolerability of  $\Delta$ 9-THC-Hemisuccinate in a Suppository Formulation as an Alternative to Capsules for the Systemic Delivery of  $\Delta$ 9-THC. Med Cannabis Cannabinoids 2018; 1(1): 44-53.

10. Yang EC, Koenig NA, Gong M, et al. Cannabis use preferences in women with myofascial pelvic pain: A cross-sectional study. Eur J Obstet Gynecol Reprod Biol X 2023; 18: 100192.

11. Rower JE, King AD, Wilkins D, et al. Dronabinol Prescribing and Exposure Among Children and Young Adults Diagnosed with Cancer. J Adolesc Young Adult Oncol 2021; 10(2): 175-84.

12. Subramaniam VN, Menezes AR, DeSchutter A, Lavie CJ. The Cardiovascular Effects of Marijuana: Are the Potential Adverse Effects Worth the High? Mo Med 2019; 116(2): 146-53.

13. Cannabis Research and Policy Project Team, Colorado School of Public Health, University of Colorado. A scoping review on health effects of high-concentration cannabis products: Findings on key policy questions. 2023. Accessed on August 21, 2024, at https://www1.ucdenver.edu/docs/librariesprovider151/default-document-library/final-hb-1317-report-with-appendix-04-19-23.pdf?sfvrsn=cf5725bb\_0

14. Senderovich H, Patel P, Jimenez Lopez B, Waicus S. A Systematic Review on Cannabis Hyperemesis Syndrome and Its Management Options. Medical Principles and Practice 2021; 31(1): 29-38.

15. Hartman RL, Brown TL, Milavetz G, et al. Cannabis effects on driving longitudinal control with and without alcohol. J Appl Toxicol 2016; 36(11): 1418-29.

