

Practical Considerations for Symptom Relief with Medical Cannabis

Kelly Butterman
Lead Cannabis Educator
Verdes Cannabis
kbutterman@verdesfoundation.org



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Objectives

Drug Scheduling

Role of the Endocannabinoid System

Role of the Phytocannabinoids in Symptom Relief

Delivery Methods

Safety Considerations

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Drug Scheduling:

Clinicians are limited to the type of guidance they can provide to patients because of the way cannabis is scheduled as a drug

DEA Schedule	Abuse Potential	Example of Drugs	Medicinal Use
Schedule I	Highest	Heroin, LSD, Marijuana, Psilocybin	No accepted use; limited use for research purposes
Schedule II	High	Morphine, PCP, Cocaine	Accepted use with restrictions
Schedule III	Medium	Selected Amphetamines, Anabolic Steroids, Codeine with aspirin	Accepted use
Schedule IV	Low	Diazepam, Ambien, Xanax	Accepted use
Schedule V	Lowest	Over the counter prescription drugs containing codeine	Accepted use

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Figure 2. CB1 and CB2 receptors throughout the body.

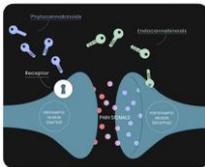
Endocannabinoid System Review

The Endocannabinoid System (ECS), regulates and controls many of our most critical bodily functions such as learning and memory, emotional processing, sleep, temperature control, reproduction, pain control, inflammatory and immune responses, and appetite.

The ultimate goal of the ECS is homeostasis.

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Endocannabinoid System: How it Works



- Endocannabinoids and their receptors are found throughout the body; in the brain, glands, immune cells, organs, connective tissues, and more.
- ECS imbalances may lead to the development of diseases and medical conditions.
- Phytocannabinoids can mimic the endocannabinoids and can be a supplement for the ECS.
- Small doses of cannabinoids can signal the body to make more endocannabinoids.

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The Role of Phytocannabinoids in Symptom Relief Considerations

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Phytocannabinoids

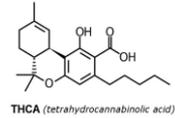
- Chemical compounds secreted by the resin glands of the plant such as THC and CBD
- Over 100 different cannabinoids identified
- Facilitate communication between cells
- Turn on specific receptors to exert a wide variety of effects
- Mimic compounds our bodies naturally produce, called endocannabinoids



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Phytocannabinoids

THCA – Tetrahydrocannabinolic Acid

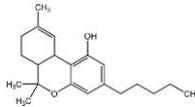


- The raw form of THC
- Non-psychoactive
- With the right environment and time, converts to THC (decarboxylation)
- Strong antiemetic
- Anti-inflammatory
- Neuroprotective
- Anticonvulsant
- Can be energizing
- 30 times more bioavailable than THC

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Phytocannabinoids

Δ 9 THC - Tetrahydrocannabinol

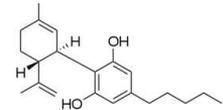


- The principal psychoactive cannabinoid
- Most abundant and popular cannabinoid
- Anti-inflammatory
- Anti-epileptic
- Anti-depressant
- Appetite stimulant
- Neuroprotective
- Anti-spasmodic
- Interrupts pain signals traveling to the brain
- Anti-insomnia

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Phytocannabinoids

CBD - Cannabidiol

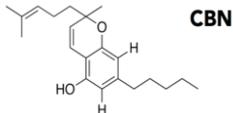


- Reduces psychoactive effects of THC
- Works well with THC
- Helps support homeostasis
- Anti-inflammatory
- Pain
- Anti-spasmodic
- Anti-depressant
- Anti-anxiety, strong affinity for the 5HT1-A receptors
- Anti-psychotic
- Aids in blood glucose control
- Anti-convulsant
- Anti-seizure

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Phytocannabinoids

CBN – Cannabinol



- A breakdown product of aging THC
- Little to no psychoactivity
- When combined with THC produces higher levels of sedation
- Appetite stimulant
- Reduces intraocular eye pressure

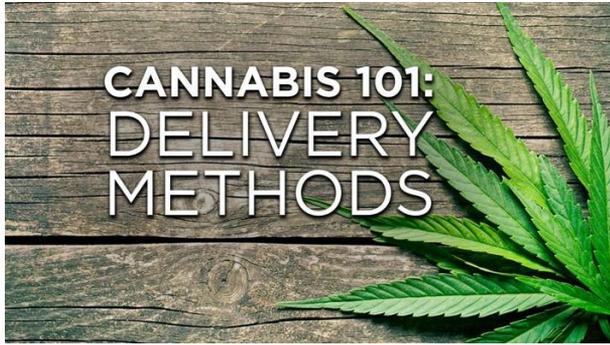
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Symptom Relief Benefits of Cannabis

- Sleep
- Pain
- Muscle spasms
- Anxiety
- Mood
- Tremors, abnormal involuntary movement
- Neuroprotective
- Appetite, nausea
- Enhanced quality of life



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Cannabis Delivery Methods

Inhalants

- Onset – 0-15 minutes
- Lasts 1-4 hours
- Easy to control dosing
- Minimal amount to be effective
- Easy to administer around other pharmaceuticals



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Cannabis Delivery Methods

Edibles

- Slower onset: 30 min – 2+ hours
- Can last 4 - 10+ hours
- Liver metabolism converts Δ^9 THC to Δ^11 Hydroxy THC, a more psychoactive and longer lasting compound
- Edibles should be taken apart from other medications by 1-2 hours to avoid potential interactions



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Cannabis Delivery Methods

Tinctures

- Onset 15-45 Minutes- Sublingually
- Can last 2-6 Hours
- Very precise way to consume
- Easy, conservative way to adjust amount
- Easy to micro-dose



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Cannabis Delivery Methods

Topicals

- Onset 10-15 minutes
- Effects last 1-3 hours
- No psychoactive effects
- Effective for joint inflammation, pain, headaches, and tension
- Easy to layer with other cannabis products



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Side Effects and Safety Considerations

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Side Effects

Side Effect

- Biphasic effect
- Dizziness
- Safety/Falls
- Rapid heart rate
- Increased urination
- Lowers blood pressure
- Short-term memory loss
- Dry mouth
- Red Eyes



Management

- Most side effects can be managed or prevented by adjusting the amount, form, or delivery system
- Drink water
- Take a bath or shower
- Sleep or rest
- Try pure CBD
- Symptoms will resolve with some time and rest

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Safety Considerations

- CBD is a stronger inhibitor of the cytochrome p450 system than grapefruit
- CBD can reduce the enzymatic degradation of warfarin
 - Patients should notify their doctor or coumadin clinic if taking oral CBD
 - Cannabis may increase the blood-thinning effects of coumadin
 - Patient may need additional INR monitoring



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Safety Considerations

Patients with liver disease:

- Use caution with THC in the edible form, especially with high doses
- Suggest CBD products, as it can be healing to the liver cells



Patients with heart issues:

- THC lowers blood pressure. Instruct patient to change positions slowly, stay hydrated
- Avoid high potency THC strains and strains high in pinene (due to inotropic and heart racing effects)
- Recommend low-dose THC products and combine with CBD

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Safety considerations



- Keep away from children and pets
- Never drive or operate heavy machinery while on cannabis
- Cannabis may intensify the intoxicating effects of alcohol and other controlled substances
- Do not consume cannabis if pregnant or breastfeeding
- Take cannabis with food and drink plenty of water
- Understand the potency of all products purchased
- It takes the body 3-5 days to adjust to an amount of cannabis, so caution patients not increase amount too quickly
- Always wait at least **2 hours** before taking an additional amount of an edible

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THANK YOU!

The Verdes Foundation

Albuquerque
Rio Rancho
Santa Fe

www.verdesfoundation.org
505-280-2814



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