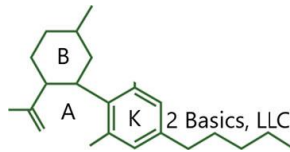


## PRACTITIONER GUIDE TO CBD



## SUMMARY OF CHAPTERS-

CHAPTER 1	CBD 101
CHAPTER 2	CBD WORKS THROUGH THE ENDOCANNABINOID SYSTEM
CHAPTER 3	COMMON BENEFITS OF CBD AND THC
CHAPTER 4	CBD INTAKE METHODS AND RECOMMENDATIONS FOR SPECIFIC SYMPTOMS
CHAPTER 5	THE DIFFERENCE BETWEEN FULL SPECTRUM AND ISOLATE CBD PRODUCTS
CHAPTER 6	RECOMMENDATIONS FOR INITIAL CBD DOSE
CHAPTER 7	THE SIDE EFFECTS OF CBD
CHAPTER 8	CBD INTERACTION WITH OTHER MEDICATIONS
CHAPTER 9	IMPORTANT CBD WEBSITE LINKS

Thomas Rocco MD

Krystle MacDonald

BAK 2 Basics, LLC

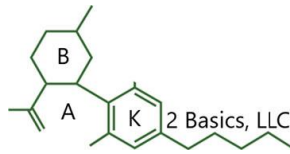
Physician endorsed CBD website

401 678-6420

[www.BAK2BasicsLLC.com](http://www.BAK2BasicsLLC.com)

[Customerservice@BAK2basicsLLC.com](mailto:Customerservice@BAK2basicsLLC.com)

## PRACTITIONER GUIDE TO CBD



## CHAPTER 1- CBD 101

A cannabinoid is a natural compound found within the cannabis plant that interacts with the human body and its receptors when consumed. Each cannabinoid effects the body differently. There are hundreds of cannabinoids found within the cannabis plant. Some examples of cannabinoids are Cannabidiol (CBD), Tetrahydrocannabinol (THC), Cannabigerol (CBG), and Cannabinol (CBN).

Cannabidiol (CBD) is a non-psychoactive cannabinoid that has many proven medical benefits. CBD is derived from the seed, stalk, stem and leaves of the plant. CBD is the second most profound cannabinoid found within the plant, second to Tetrahydrocannabinol (THC), CBD has been known to counteract the psycho-active effects from THC.

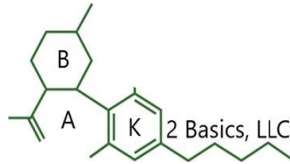
Tetrahydrocannabinol (THC) is the most famous cannabinoid found within the cannabis plant. THC is derived from the flower of the plant. THC has a strong psychoactive effect with many proven medical benefits.

Hemp is derived from the cannabis Sativa plant species. Hemp has a rich nutritional profile as they contain high levels of antioxidants, fatty acids, minerals, and vitamins.

- Hemp from the stalk has high amounts of CBD and only trace amounts of THC when cultivated from the plant.
- Hemp oil that is derived from the seed has only trace amounts of CBD and no THC therefore products from hemp seed oil are NOT quality CBD medications.

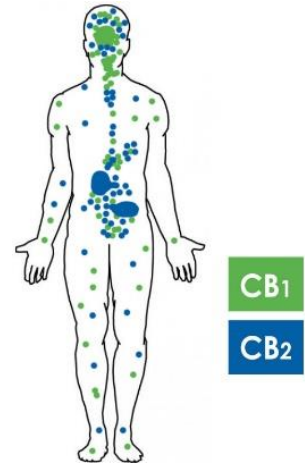
Terpenes are natural essential oils found in the cannabis plant. Terpenes give the flower a distinctive aroma or flavor. There are many terpenes found within the cannabis plant. Terpenes and Cannabinoids work together to create optimal benefit.

## PRACTITIONER GUIDE TO CBD



## CHAPTER 2- CBD WORKS THROUGH THE ENDOCANNABINOID SYSTEM

The Endocannabinoid system (ECS) is an intricate network of receptors found throughout the brain and body, which uses enzymes, proteins, and various other components to pass signals between one another. The ECS is responsible for maintaining homeostasis throughout our body and does its best to support internal stability within our body. Maintaining a general, healthy balance in our lives is very important and it is just as important for our body and everything within it to sustain a stable internal environment. Every cell in our body strives for this kind of balance. Without this balance, the cells in our body would not function properly. The ECS is made up of two receptors, CB1 and CB2. CB1 receptors are primarily found in the brain and central nervous system. CB2 receptors are primarily found in peripheral organs and in cells associated with the immune system.

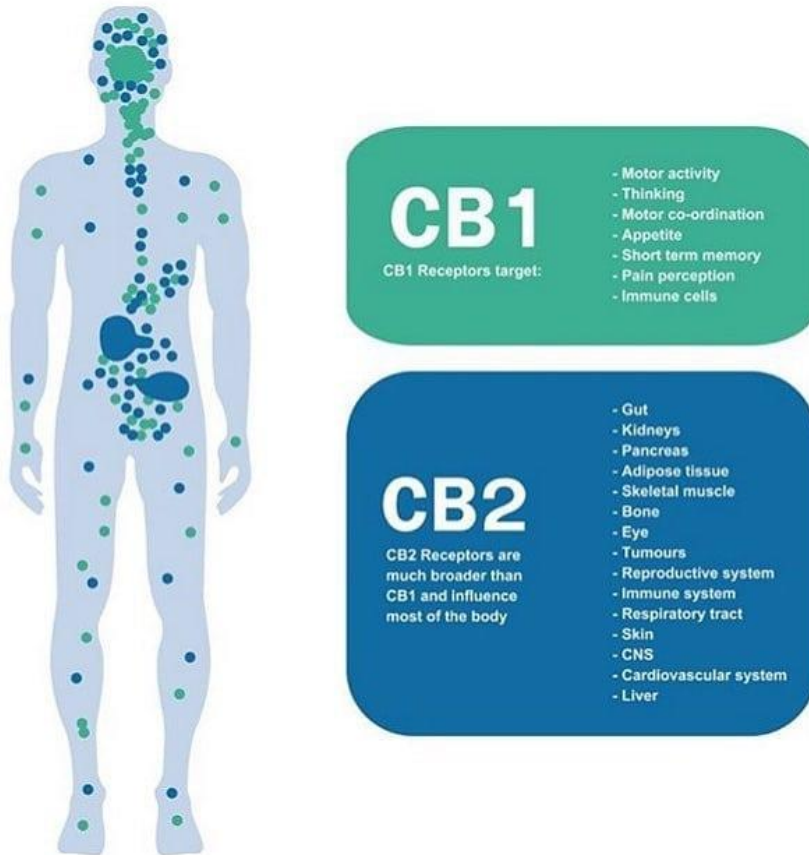


Tetrahydrocannabinidiol (THC) is the psychoactive chemical in the cannabis plant. THC primarily reacts with the CB1 receptors which causes the psychoactive effects, but it also interacts with a few of the CB2 receptors. Cannabidiol (CBD) does not have any psychoactive effects and works primarily with the immune system at the CB2 receptors. It also has indirect effects by regulating at the CB1 receptor. CBD has been shown to possibly modulate the “high” caused by the THC at the CB1 receptor. This reduces the effects of the THC and counteracts the psychoactive symptoms.

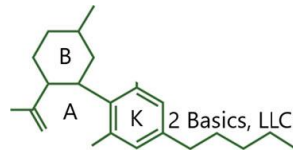
CBD is a weak antagonist at the CB1 receptor by binding it in a different place and in a different way than THC. CBD is also a strong negative allosteric modulator of the CB1 receptor. The most spectacular effects of this features can be observed in the presence of THC. CBD significantly reduces the psychoactive potential of THC. It is the result of modifying the way THC works on the CB1 receptor.

The second major endocannabinoid receptor is the CB2 receptor. Among many other functions, the CB2 is responsible for the emergence of inflammation. In the case of CB2 the opposite effect on this receptor occurs with THC and CBD. While the former is responsible for receptor stimulation, CBD is an inverse agonist of the CB2 receptor, thus it weakens its efficiency. The anti-inflammatory properties of the CBD can be attributed to this very mechanism. The effects

of CBD stem from both its indirect effects on the endocannabinoid system and its potential to influence a wide range of various other organ systems.



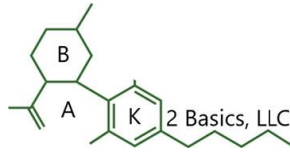
## PRACTITIONER GUIDE TO CBD



## CHAPTER 3- COMMON BENEFITS OF CBD AND THC

<b>THC</b> ● <b>CBD</b> ■	● ■	PROTECTS AGAINST CANCER	● ■	MUSCLE RELAXANT
	● ■	REDUCES NAUSEA	● ■	PROTECTS NERVOUS SYSTEM
	● ■	REDUCES PAIN	■	ANTI-DIABETIC
	■	CAUSES DROWSINESS	■	IMPROVES BLOOD CIRCULATION
	●	INCREASES APPETITE	● ■	RELIEVES PSORIASIS
	● ■	ANTIDEPRESSANT	● ■	RELIEVES CROHN'S DISEASE
	● ■	RELIEVES SPASMS	● ■	ANTI-INFLAMMATORY
	■	DECREASES SEIZURES	■	BONE STIMULANT
	■	REDUCES ANXIETY	■	RELIEVES RHEUMATOID ARTHRITIS
	●	ANTIMICROBIAL	● ■	ANTIOXIDANT
	■	ANTIBACTERIAL	■	ANTIPSYCHOTIC

## PRACTITIONER GUIDE TO CBD



## CHAPTER 4- CBD INTAKE METHODS AND RECOMMENDATIONS FOR SPECIFIC SYMPTOMS

There are many ways of using CBD products. The way to take CBD depends on your personal preference and as important the symptoms that are attempted to relieve.

- |                                 |                               |                    |
|---------------------------------|-------------------------------|--------------------|
| • Oral/sublingual-              | onset 10-60 minutes           | duration-3-6-hours |
| • Ingestion (edibles/capsules)- | onset 25-130 minutes          | duration 5-8 hours |
| • Topical application-          | onset 15-30 minutes           | duration 2-6 hours |
| • Inhalation (smoke/vape)-      | onset immediate to 15 minutes | duration 1-5 hours |

CBD has been known to improve many different symptoms. Here is a list of the most common symptoms and what method of intake may relieve them best:

Pain

- For generalized body pain symptoms, Oils, Capsules and Edibles tend to work best for relief. Oils have a fast onset of relief while Capsules/Edibles have a longer duration of effect with time of onset not as fast as oils.
- For localized pain symptoms, Topical Creams, Salves and Patches tend to work best for relief. These methods have a fast onset of relief and longer lasting results.

Anxiety/PTSD

Oils and Hard Candy Edibles tend to work best for relief.

- Oils are fast acting and relieve the anxiety symptoms within seconds or minutes.
- Edibles usually have a delayed effect because of the breakdown process. However, when consumed in a Hard Candy or Lozenge form the CBD is absorbed through the gums quickly, giving a quick onset of relief, also tends to have a longer lasting effect.
- Capsules could also be beneficial if taken regularly.

Seizures

- Oils work best for relief. Oils are absorbed very quickly when taken via the Sublingual route under the tongue, causing a quick response in relief of symptoms.
- Edibles and Capsules could also be an option as a preventive measure of seizure events.

### Migraines

- Oils tend to work best because of the quick response time for acute headache/migraine relief.
- Edibles and Capsules could also be an option as a preventive measure of headache/migraine events.

### Muscle Spasms/Tremors

Oils, Edibles and Capsules tend to help relieve muscle spasms and tremors.

- Oils are faster acting with a shorter duration of effect.
- Capsules have a longer lasting symptom relief.
- Topical Creams could also be applied to muscle spasms with some symptom relief.

### Joint/Muscle Pain

- For localized Joint or Muscle pain, Creams/Salves and Patches tend to work best. Both of which have a quick onset of symptom relief and is absorbed through the skin directly into problem area.
- For generalized Joint/Muscle pain, Oils and Edibles/Capsules tend to work best. Oils offer a faster effect as compared to Edibles/Capsules which do not work as fast but offer a longer duration of relief.

### Insomnia

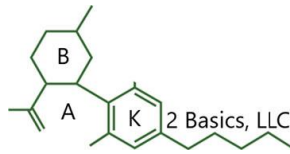
Oils and Edibles tend to work best.

- Oils offer a fast onset to help insomnia.
- Edibles last longer and can help you to remain asleep for a longer duration of time.

### Fibromyalgia and Arthritis

- For localized Fibromyalgia or Arthritis, Creams/Salves tend to work best. Creams/Salves have a quick onset of symptom relief and is absorbed through the skin directly into problem area.
- For generalized pain, Oils and Edibles/Capsules tend to work best. Oils offer a faster effect as compared to Edibles/Capsules which do not work as fast but offer a longer duration of relief.

## PRACTITIONER GUIDE TO CBD



## CHAPTER 5- THE DIFFERENCE BETWEEN FULL SPECTRUM AND ISOLATE CBD PRODUCTS

## Isolate CBD products

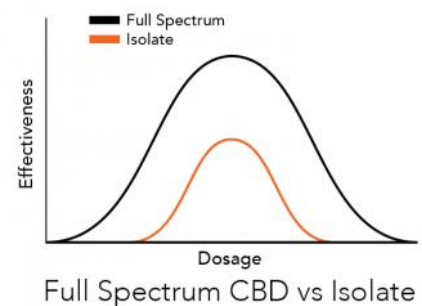
- Contain Cannabidiol only, meaning no or trace amounts of other Cannabinoids or Terpenes are present.
- CBD Isolate products have a purity rating of more than 99.9% and are recommended for those who may be subject to drug tests or those who have a sensitivity to THC.

## Full Spectrum CBD products

- Extract all the Cannabinoids and Terpenes from the source material.
- This is often seen to produce more effective CBD products useful for a broad array of purposes.
- There is 0.3% or less of THC and it will not make you feel “high”, but it might show up in a drug test.
- With full spectrum CBD products as compared to isolates, there is an "entourage effect" from the full spectrum products. This refers to the improve effectiveness of CBD from the addition of other cannabis plant compounds of terpenes and small amounts of THC (< 0.3%), rather than just by itself in a CBD isolate.

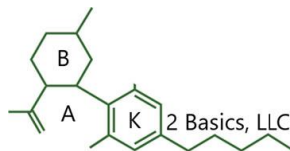
## In summary:

- High quality full-spectrum CBD medications will be more effective and efficient option than CBD isolate products.
- This explains the need for a higher CBD isolate dose necessary to get the same effect as a full spectrum CBD product as described in the table.
- The table also illustrates the “entourage effect” of a full spectrum CBD product.





## PRACTITIONER GUIDE TO CBD



## CHAPTER 6- RECOMMENDATIONS FOR INITIAL CBD DOSE

The IMPORTANT FACTORS to account for when calculating the correct initial CBD dosage are-

- Concentration of CBD
- Type of CBD product (full spectrum versus isolate product)
- Weight of the individual
- Individual's body chemistry
- The severity of the condition being treated

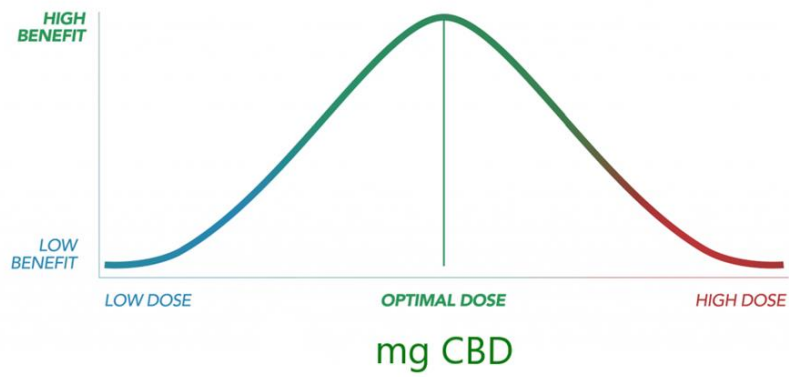
Safe steps for starting initial CBD dose-

1. Estimate CBD dosage based upon body weight. A chart explaining starting dose as it pertains to weight and severity of symptoms is shown.
2. Start small and increase gradually. It is important to first determine your initial dosage based on your weight and severity of symptoms.
  - Gauge how your body reacts to that amount of CBD.
  - Increase gradually while continuing to monitor your body's reactions until you find the perfect dosage that works for your situation.
  - Start low and go slow is the safest approach to initial CBD use.
3. May need to take CBD dose consistently every day. It may need up to 30 days to build up into your system for proper effect and dosage.

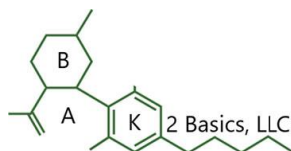
CBD Dose Calculator is available to guide patients to the appropriate starting dose as it pertains to the weight of the patient and to different health issues. This CBD Dosage Estimation Calculator is built on Independent CBD dosage surveys including data from published research and reports, user experience, studies, blogs and forums).

<https://cbddosagecalculator.com/start/>

Self Assessment	Weight (lbs)			
	46 - 85	86 - 150	151 - 240	240+
Mild	9mg	12mg	18mg	22.5mg
Medium	12mg	15mg	22.5mg	30mg
Severe	15mg	18mg	27mg	45mg



## PRACTITIONER GUIDE TO CBD



## CHAPTER 7- THE SIDE EFFECTS OF CBD

Studies have explored CBD and its potential for side effects however there needs to be more literature on this topic to determine long-term safety and possible interactions with other medications. The limited data does show that even chronic use and high doses are generally well tolerated by people.

In fact, a study from Cannabis and Cannabinoid Research in 2017 concluded that the comparison of adverse reactions of pharmaceutical drugs to CBD medications used for the treatment of similar medical conditions showed a better side effect profile for CBD. This could improve patient compliance and adherence to treatment.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5569602/>

While there haven't been reports of serious adverse side effects from CBD, these are a few potential side effects to be aware of with its use:

- Diarrhea
- Nausea
- Tiredness
- Fatigue
- Changes in appetite
- Changes in weight
- Dry mouth
- Low blood pressure

Most patients tolerate CBD well without any side effect. Also, it should be noted that potential side effects can vary according to different parameters, including some that are beyond the patient control.

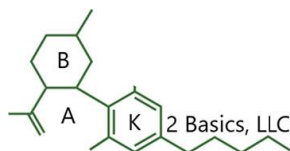
Side effects can vary due to:

- CBD dosing
- Age
- Fat consumption
- Factors that will affect the absorption of CBD

In addition, two international health organizations supported its safe use in 2018. The World Health Organization (WHO) has stated that "CBD exhibits no effects of abuse or dependence potential and no evidence of health-related problems associated with it." The World Anti-Doping Agency (WADA) removed CBD from its list of prohibited substances.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5569602/>

## PRACTITIONER GUIDE TO CBD



## CHAPTER 8- CBD INTERACTION WITH OTHER MEDICATIONS

Research has shown that Cannabidiol (CBD) has the potential to treat various medical conditions by manipulating the endocannabinoid system (ECS), with very few unintended effects. CBD is a safe, non-intoxicating, and non-addictive cannabis compound with significant therapeutic attributes, but CBD-drug interactions may be problematic in some cases.

The CBD interaction with medications can be caused by the effect of the inhibition or deactivation of the cytochrome P450 (CYP) enzyme system with high CBD doses. CYP is the system principally found in the liver that is responsible for metabolizing many drugs that patients consume. A large dose of CBD can cause CYP enzymes to become temporarily inactive. When those enzymes are inactive, it becomes much harder for processing certain drugs. In fact, basically any drug that is metabolized by CYP enzymes has the potential to interact with CBD. The result is an increase of the medication level of effect by decreasing the drug metabolism.

Preclinical research shows that CBD is metabolized by CYP enzymes while functioning as a competitive inhibitor of the same liver enzymes. By occupying the site of enzymatic activity, CBD displaces its chemical competitors and prevents CYP enzymes from metabolizing other compounds. The extent to which CBD behaves as a competitive inhibitor of CYP depends on how tightly CBD binds to the active site of the metabolic enzyme before and after oxidation. This can change greatly, depending on CBD administration, dose, the unique attributes of the individual taking this medication, and whether isolated CBD is used. If the dosage of CBD is low, it will have no noticeable effect on CYP enzyme activity, but CBD may still exert other effects.

There is no clearly established cut-off dose in which CBD does not interact with other drugs. Therefore, the recommendation of “start low and go slow” with initial CBD use will lessen the potential of drug interactions.

The following drug groups are metabolized by the cytochrome P450 enzyme system with the potential of prolonged medication effect with high dose administration of CBD:

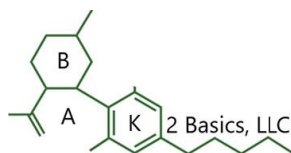
- Steroids
- HMG CoA reductase inhibitors
- Calcium channel blockers
- Antihistamines
- Prokinetics

- HIV antivirals
- Immune modulators
- Benzodiazepines
- Antiarrhythmics
- Antibiotics
- Anesthetics
- Antipsychotics
- Antidepressant
- Anti-epileptics
- Beta blockers
- PPIs
- NSAIDs
- Angiotension II blockers
- Oral hypoglycemic agents
- Sulfonylureas
- Buprenorphines

Below is a drug interaction checker website for any medications. Use the word 'cannabidiol' (CBD) to check interactions of medications with CBD.

<https://reference.medscape.com/drug-interactionchecker>

## PRACTITIONER GUIDE TO CBD



## CHAPTER 9- IMPORTANT CBD WEBSITE LINKS

- CBD Dose Calculator-  
<https://cbddosagecalculator.com/start/>
- Drug interaction checker with any medications including CBD-  
<https://reference.medscape.com/drug-interactionchecker>
- Guides for safe CBD purchase-  
<https://www.bak2basicsllc.com/consumer-report-article-how-to-shop-for-cbd-in-september-2018/>  
<https://www.consumerreports.org/cbd/how-to-shop-for-cbd/>
- Understand difference between CBD oil and Hemp (seed) oil-  
<https://www.bak2basicsllc.com/about-us/education/blog/>  
<https://www.bak2basicsllc.com/cbd-oil-vs-hemp-oil/>

Thomas Rocco MD  
 Krystle MacDonald  
 BAK 2 Basics, LLC  
 Physician endorsed CBD website  
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[www.BAK2BasicsLLC.com](http://www.BAK2BasicsLLC.com)  
[Customerservice@BAK2basicsLLC.com](mailto:Customerservice@BAK2basicsLLC.com)