



THE MEDICINE BOOK

Ailment & Treatment Guide

Version 1

Healing with cannabis – how to use it effectively.

TABLE OF CONTENTS

<i>welcome to the medicine box.....</i>	<i>5</i>
<i>BEFORE USING CANNABIS.....</i>	<i>6</i>
<i>CANNABIS AS A MEDICINE</i>	<i>6</i>
<i>THE BIOLOGY AND CHEMISTRY OF CANNABIS AND CBD.....</i>	<i>7</i>
Introduction to Cannabis Plants - Medicine in the Resin.....	7
Sativa vs. Indica	9
<i>HOW CANNABIS WORKS WITHIN THE BODY</i>	<i>9</i>
The Entourage Effect.....	9
Absorption of Cannabis Medicines.....	10
Metabolism of Cannabis	10
Dosage	11
<i>THE ENDOCANNABINOID SYSTEM.....</i>	<i>11</i>
<i>ENDOCANNABINOID RECEPTORS</i>	<i>13</i>
<i>PHYTOCANNABINOIDS AND TERPENOIDS.....</i>	<i>14</i>
Phytocannabinoids.....	14
Terpenes	17
<i>MICRODOSING CANNABIS</i>	<i>19</i>
How to Microdose	20
<i>Delivery Methods & Dosing.....</i>	<i>21</i>
<i>EDIBLES DOSING CHART</i>	<i>23</i>
<i>Cannabis COncentrates</i>	<i>24</i>
CANNABIS CONCENTRATES DEMYSTIFIED	24
KIEF	25
HASH	26
BHO (Butane Hash Oil).....	27
HASH, ICE WATER HASH,.....	28

COLD WATER HASH, FULL MELT	28
PHO (Propane Hash Oil)	29
SHATTER, SAP, PULL N SNAP	30
BUDDER	31
WAX.....	32
CRUMBLE.....	33
LIVE RESIN	33
CO2 Oil.....	34
ROSIN.....	35
CBD ISOLATE.....	37
DISTILLATES	37
THC ISOLATE / Crystalline.....	38
Solvent vs. Solventless Extractions	39
<i>The Medicine Lab</i>	40
The Medicine Box's 3 Phase MDBX Cannabis Testing Certification Process.	40
<i>Elders and Cannabis</i>	42
MEDICAL USES OF CANNABIS	44
Alzheimer's Disease and Dementia.....	44
Anxiety and Stress	47
Arthritis	48
Cancer.....	50
ORAL TREATMENT WITH RSO	52
COPD	54
Crohn's and Colitis.....	55
Depression.....	57
Epilepsy	59
Fibromyalgia.....	60
Glaucoma.....	61

Insomnia.....	62
Menopause	64
Migraines	66
Muscle and Joint Pain	67
Multiple Sclerosis (MS)	69
Parkinson’s Disease	70
PMS and Menstrual Cramping.....	72
Psoriasis	74
Restless Leg Syndrome	75
Sciatica	76

WELCOME TO THE MEDICINE BOX

Welcome to The Medicine Box. We are located in a Mohawk community known as Kanehsatake. It is without cause but only a custom to incorporate Mother Nature's resources as a form of healing for our bodies of any unwanted negative feelings, ailments, disease, or even discomfort. There is a vast amount of little living things that are growing everywhere on the Earth that can rid us of all sorts of sickness. We just so happen to have the key to unlocking the power to completely change the way our bodies react to them with a medicine like cannabis. It does not go without notice that there are other forms of medication that also exist and are otherwise necessary for people to live a healthy life. A list of these abnormal conditions do take into consideration microscopic factors that cannabis could not heal entirely. This book is created for those who seek to broaden their understanding of how something as exquisitely alive as the plant also know as hemp, or marijuana, can provide you with an incredibly fulfilling life. Amidst removing all the confusion about exactly what this plant can really provide, you will find clarity in how nature can be more powerful to restoring you, your body, your mind, and your spirit more than you could imagine.

BEFORE USING CANNABIS

CONSULT YOUR PHYSICIAN if you have been diagnosed with, or believe that you may suffer from:

- Schizophrenia, bipolar disorder, or severe depression
- Heart disease, chest pain, high blood pressure, angina, or irregular heart beat
- A history of stroke
- Chronic obstructive pulmonary disease or chronic bronchitis
- An immune disorder or medical treatment that compromises immune function
- Are taking a medication, such as some blood thinners, where cannabis compounds, such as those found in high doses of CBD may interfere with that medication's metabolism.

Due to safety issues and prevention of any unwanted side effects it is suggested to speak with a physician/healthcare professional before using medical cannabis, as the use of cannabis may not be safe, or special precautions may be advised. Also, if you are under the age of 22, it is important to speak to your doctor about the safety in using high-THC cannabis medicines without the addition of a CBD buffer. There have been studies that show evidence that exposure to THC may interfere with specific aspects of adolescent and young adult brain development and could potentially encourage the development of schizophrenia in a small, but susceptible, group of young people,

especially those that have a family history of the disorder. Although studies are still in the works in terms of providing significant evidence to support or disprove the role of cannabis in the development of psychosis. Regardless of the evidence and until there is proof, young patients should exercise considerable caution before using THC-dominant cannabis medicines and consider using cannabis that contains a CBD buffer. Immune-compromised patients should take special care to avoid pathogenic fungi/molds that could be present on herbal cannabis that has not been screened for these microbial contaminants.

CANNABIS AS A MEDICINE

The cannabis flower as a medicine can address symptoms of many ailments. It is rarely a cure, but enhancement of the Endocannabinoid system with well thought-out amounts of the plant cannabinoids may in fact diminish the prevalence of diseases and inhibit others. Medicinal cannabis can be a

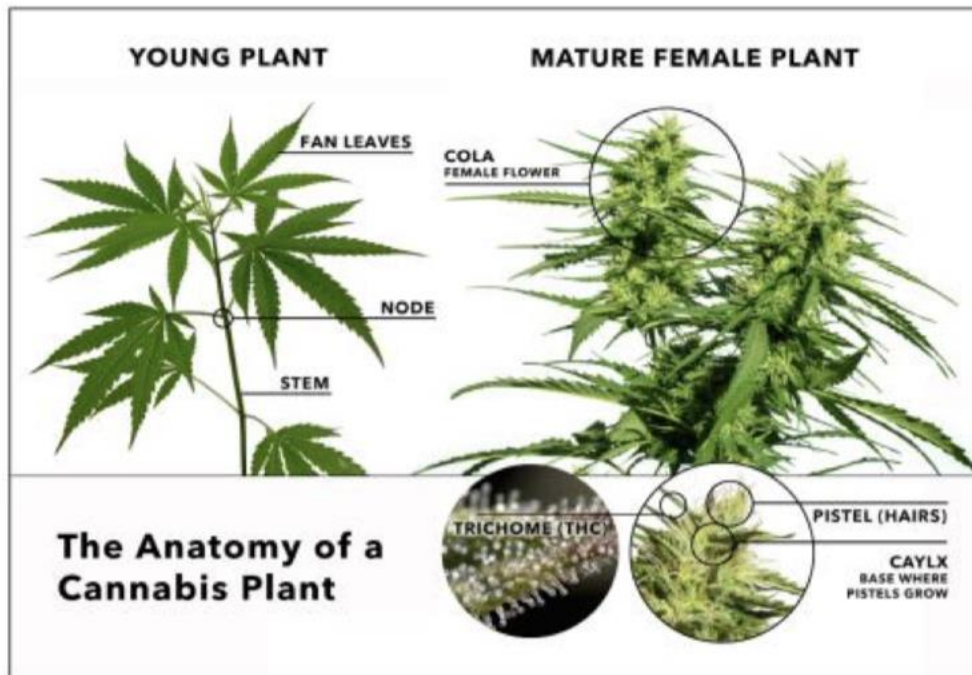
successful remedy for anyone that consumes it responsibly and ,...dosing and frequency. Cannabinoids, known to be medicinally active substances that are produced within the plant, interact with the body's Endocannabinoid System, located through the body. Different cannabis varieties deliver different chemistries, which in turn produce a wide range of medicinal effects and diverse psychoactive trajectory. It is important to take the time to not only understand the natural science produced within the cannabis plant as well as how the body interacts with that chemistry in order to be able to use cannabis more predictably and effectively.

THE BIOLOGY AND CHEMISTRY OF CANNABIS AND CBD

Introduction to Cannabis Plants - Medicine in the Resin

Like many medicinal plant and herbs, the cannabis plant produces specialized hairs called trichomes that secrete resinous oils. The female cannabis plant produces a profusion of resin-producing capitate-stalked glandular trichomes in its aerial flowering tops. The tips of these trichomes secrete terpenoids, fats and cannabinoids. The unpollinated female cannabis plant produces a much higher concentration of medicinal compounds in its resin – up to 20x – more than a male or fertilized female plant. Under magnification, a trichome resembles a golf ball sitting atop a tee. The golf ball is the trichomes resin head, filled with oils secreted from secretory cells at the tip of the trichomes stalk. When resin heads are ruptured, they release a powerful aromatic chemical called terpenes, which are associated with the

smell of cannabis and regulate the effects of THC and the odorless cannabinoids.



Node - they are a hormone basecamp on a plant, generally the part of a plant where leaves emerge

Stalk - the main stem of a plant

Trichome (contains the THC) - these are the little clear/white crystals on pot plants. They are actually sacks that contain plant resins

Fan Leaf - these are the energy producers, they take the sunlight and turn it into energy, generally not too much THC will form on them and they are largely a by-product of production

Cola (flower) - this is the top of the budding branch, and is a description for the whole bud structure as it forms

Pistil - these are small white hairs that come out of the top of the buds They are actually a female plants reproductive receptors

Calyx - this is the base or pod where the female reproductive parts (or pistils) emerge (or are formed). In male plants they will carry male reproductive parts f

The cannabis plant consists of two basic species, Cannabis Sativa and Cannabis Indica. Both are psychoactive and contain the cannabinoids required to engage the Endocannabinoid System for specific therapeutic purposes. Indica plants tend to be short and stinky, with wider leaves than Sativa's. Sativa plants grow longer, higher and show a

much finer leaf structure. It is important to note that Indicas and Sativas produce different THC:CBD/CBN ratios. These ratios are the determinants of the degree to which the balancing properties of the whole plants' components are additive or cancel each other out.

Sativa vs. Indica

Sativa – Greater THC; Less CBD/CBN Ratio	Indica – Greater CBD/CBN; Less THC Ratio
Generally stimulating, energizing, uplifting	Generally sedating, relaxing, grounding
More mental/emotional	More physical
Usually more extrovert	Usually more introvert
Best for daytime use	Better for after work is done, bedtime
Increases alertness	Sleeping aid
Consider with depression	Consider with anxiety
Pain relief, muscle relaxant	Pain relief, muscle relaxant
THC binds both CB1 and Cb2 receptors	CBD has greater affinity for CB2

HOW CANNABIS WORKS WITHIN THE BODY

The cannabis plant produces more than 700 chemical compounds, including 120 phytocannabinoids, where fewer than 50 of these compounds are produced in significant amounts. The best-known cannabis compound is the phytocannabinoid, tetrahydrocannabinol or THC, is a single chemical component of the cannabis plant and is comprised of a dozen of medicinally active substances.

The Entourage Effect

Cannabis compounds work together in synergy, delivering what is known as the “Entourage Effect.” The cannabis plant produces an entourage of cannabinoids and terpenoids that clearly modulate the effects of one another and often reduce the side effects of one

component while enhancing the effects of another. This synergistic activity is between that of THC and CBD. Cannabidiol (CBD) reduces the anxiety that can be caused by Tetrahydrocannabinol (THC) and can reduce the forgetfulness that is produced by moderate doses of THC.

Absorption of Cannabis Medicines

When THC is smoked or efficiently vaporized, the inhalation of the phytocannabinoid can reach its peak blood plasma concentrations within six to seven minutes of ingestion. THC from smoking is detectable in the bloodstream within a few minutes after inhalation. The efficiency of one's inhalation is dependent on the size and duration of the inhalation.

Sublingual (under the tongue) or oromucosal (on the buccal tissues lining the mouth) administration of cannabis medicines are not as efficient as by inhalation, although absorption and onset of oromucosal cannabis may occur as quickly as 5 to 15 minutes after application. Peak blood concentrations for oromucosal THC are reached within 4 hours, with other cannabinoids such as CBD taking a little long to peak.

The liver metabolizes cannabinoids and modifies them before they reach the bloodstream. This liver absorption and metabolism of cannabinoids is called the first-pass effect.

Topical absorption of THC can be accomplished by blending the THC with a proper base. This method of administration can be used to treat skin conditions, like psoriasis and inflammatory ailments like osteoarthritis.

Metabolism of Cannabis

The method and form that cannabis is consumed will greatly affect how it works as a medicine. Different forms will react differently at the

molecular level in the body therefore having an impact on the way it is metabolized. Based on which delivery method is chosen, it is important to note that each one will have an impact on the speed, efficiency and how long effects of cannabis will last. Learning how to master cannabis delivery methods and which dosage works for you will help in how to treat your specific medical condition.

Dosage

What is the most rational approach to medical cannabis dosage of THC? It is important to note that our aim is to minimize cognitive and motor impairment therefore intaking the smallest amount of THC cannabis that delivers the desired outcome is the best approach. Small doses are most often the most effective in activating a receptor, whereas a high dose may only obstruct that same receptor.

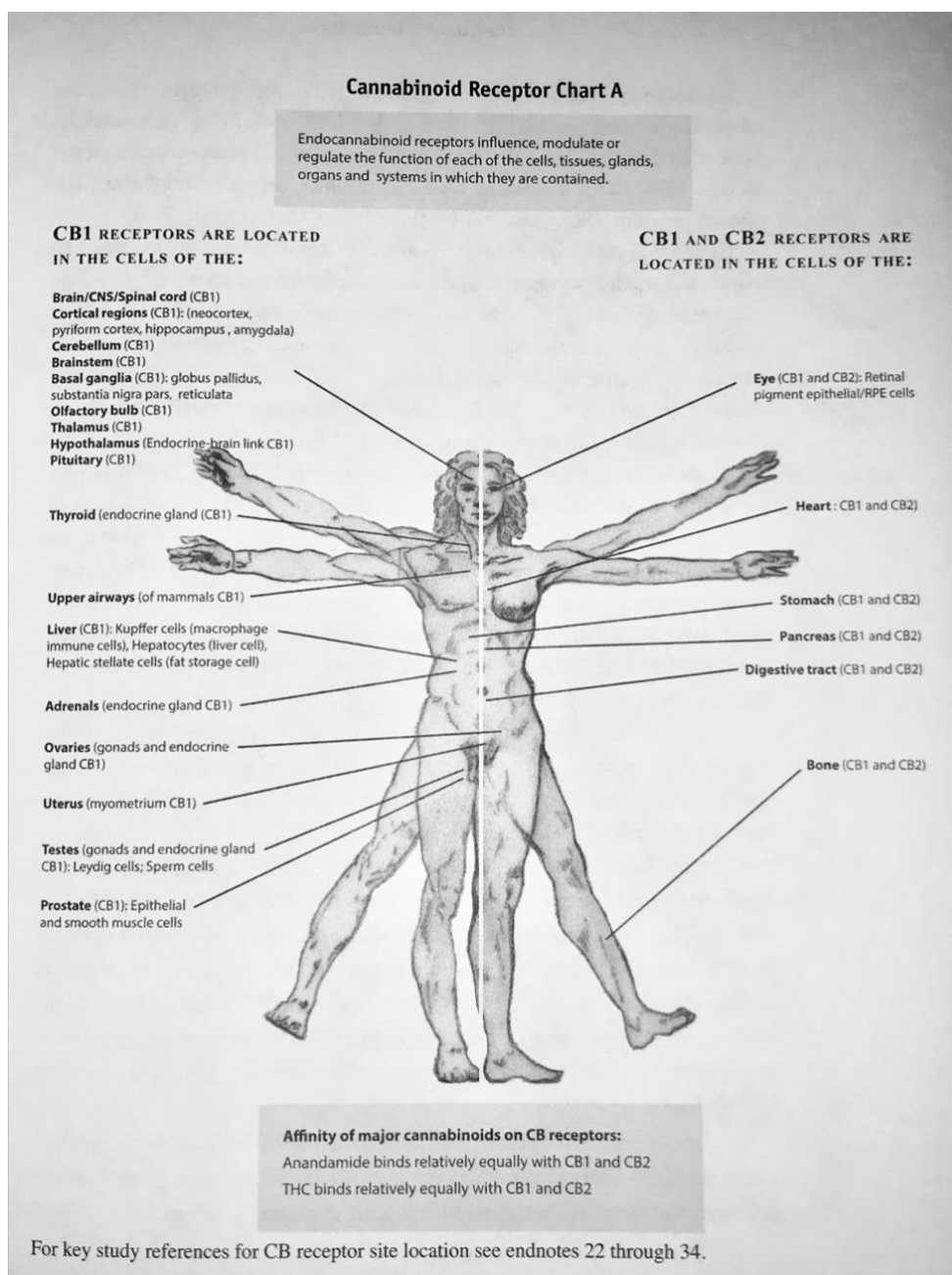
When correctly dosed, cannabis can be effective in both orally and sublingually. It can take 45 minutes to 2 hours for swallowed cannabis medicines to begin to take effect. When taken sublingually or buccally (absorbed through mouth tissues), delta-9-THC is absorbed directly into the bloodstream and its onset can be felt typically within 15 minutes, while peak effects may not be reached for 45 minutes to 2 hours. An oral cannabis dose is effective for two to three times longer than smoked or vaporized herbal cannabis, reducing the need for repeated administration.

THE ENDOCANNABINOID SYSTEM

It is comprised of three principle elements: endocannabinoid receptors, specialized molecules called endocannabinoids that interact with those receptors; and enzymes that either synthesize or metabolize these endocannabinoids.

The endocannabinoid system is important in normalizing and has the key role in not only regulating pain, appetite, immune function, but is

responsible in modulating pleasure, energy and well-being as well as regulating functions such as memory, digestion, motor function, immune response and inflammation. The ECS also plays a role in bringing the body back to a healthy state when faced with injury and disease. When scientists began to study how cannabis works within the body, discovering which protein receptor molecule in the body was interacting with THC was at the forefront of the mechanism of action of the cannabis plant.



The CB1 receptor is expressed throughout the brain, where the endocannabinoids and CB1 combine to form a “circuit breaker,” which modulates the release of both inhibitory and excitatory neurotransmitters across the synapse of neurons in the brain. It is activation of the CB1 receptor that is responsible for the psychoactive effects of cannabis, since THC is mimicking an endocannabinoid by binding to its receptor. The brain functions that are affected by the endocannabinoid system include decision-making, cognition, emotion, learning and memory, as well as regulation of bodily movement, anxiety, stress, fear, pain, body temperature, appetite, sense of reinforcement or reward, blood-brain permeability, and motor control. It is important to note that the brain stem is one part of the brain that does not express the CB1 receptors. The brain

stem is an important region of the brain that is responsible for respiration and circulation and due to the lack of CB1, cannabis overdoses do not cause respiratory depression and death, both of which are possible with opioid overdoses.

CB2 receptors are found in immune and blood cells, tonsils, and the spleen. From these sites, CB2 receptors have control over the release of cytokines -immunoregulatory proteins – linked to inflammation and general immune function throughout the body. Recent studies has shown that CB2 expression is also present in a part of the brain known as the hippocampus. In the hippocampus, CB2 receptors appear to modulate self-activity and information flow between brain networks, potentially assisting in the selection of inputs that may guide complex behaviors.

ENDOCANNABINOID RECEPTORS

The two primary subtypes of classical cannabinoid receptors in the endocannabinoid system are CB1 and CB2. These receptors are distributed throughout the central nervous and immune systems, as well as many other tissues such as the brain, gastrointestinal system, reproductive and urinary tracts, spleen, endocrine system, heart and circulatory system. Many of the physiological effects of cannabis are believed to be caused by the interaction of phytocannabinoids with the CB1 and CB2 receptors.

Endocannabinoids appear to be connected with the concept of homeostasis – maintaining physiological stability – and help to redress specific imbalances presented by disease or by injury.

Endocannabinoids’ role in pain signaling has led to the hypothesis that

endocannabinoid levels may be responsible for the baseline of pain throughout the body.

PHYTOCANNABINOIDS AND TERPENOIDS

More than 700 chemical constituents are produced within the cannabis plant, of which the phytocannabinoids and terpenoids are the principal active ingredients. Upon heating through smoking, vaporizing, cooking, or being stored at room temperature for a reasonable length of time, phytocannabinoid acids are converted to their chemically neutral and more widely known forms: THC, CBD, CBG, CBC, and CBN through a process called decarboxylation. Phytocannabinoids are relatively non-toxic and have extremely high lethal-dose requirements in humans, which is why no fatal overdose has ever been directly attributable to cannabinoids. Due to the synergy between cannabinoids and a component of the cannabis's plant essential oil called terpenoids or terpenes, the cannabis plant is able to produce differing medicinal or psychoactive effects. This relationship between cannabinoids and terpenes is in fact what is responsible for what is known as the "entourage effect."

Phytocannabinoids

The four primary cannabinoid families are

- THC (tetrahydrocannabinol)
- CBD (cannabidiol)
- CBG (cannabigerol)
- CBC (cannabichromene)
- CBN (cannabinol)

One thing to note, is that the fifth phytocannabinoid, CBN, is not produced by the plant, but is the breakdown of THC when exposed to oxygen over time.

Tetrahydrocannabinol/THC: Delta-9-tetrahydrocannabinolic acid or delta-9-THCA is the most common phytocannabinoid produced by popular drug cannabis varieties. The production of THCA within the cannabis plant occurs when the enzyme, delta-9-tetrahydrocannabinolic acid synthase, catalyzes the formation of an intramolecular single carbon-carbon covalent bond in cannabigerolic acid (CBGA), thus synthesizing THCA. THCA is non-intoxicating until heat and time convert it into psychoactive neutral forms: THC.

THC is more than simply psychoactive. It exhibits potent anti-inflammatory and analgesic activity, is neuroprotective, and reduces intraocular pressure, spasticity, and muscle tension.

Cannabidiol/CBD: Cannabidiolic acid or CBDA is the most common phytocannabinoid produced by fiber cannabis (hemp) varieties. Like all acidic cannabinoids produced by the plant, through the process of decarboxylation, CBDA can be converted to CBD by heat over time. CBD interacts with the CB1 and CB2 receptors, among others throughout the body; where these interactions can lead to CBD-based treatments for conditions ranging from strokes to acne. Beyond the endocannabinoid receptors, CBD activates, inhibits, and modulates a wide range of receptors and ion channels, including adenosine, glycine, and 5-HT1A receptors. CBD is effective in inhibiting the growth of methicillin-resistant *Staphylococcus aureus* (MRSA: an infection-causing bacterium strain), perhaps more so than the antibiotic Vancomycin.






Cannabigerol/CBG: Cannabigerolic acid or CBGA is an analgesic non-intoxicating cannabinoid that is the third most abundant cannabinoid

produced by the cannabis plant after THCA and CBDA. Cannabigerol is the precursor cannabinoid employed by the cannabis plant enzymes to biosynthesize THC, CBD, and CBC. Recent preclinical research has shown that CBG is a potent appetite stimulator, even in animals that have been recently fed. CBG is unique among the primary cannabinoids since it appears to interact predominantly with a range of receptors other than those of the endocannabinoid system. CBG is also of potential interest as an antiseptic and antibiotic, since it is an extremely potent antibacterial agent against pathogens such as MRSA. CBG may also prove of interest for its antitumor properties, especially for some forms of prostate and oral cancer.

Cannabichromene/CBC: CBC or cannabichromenic acid is a phytocannabinoid produced in the juvenile phase of flowering cycle of the cannabis plant. It is produced by decarboxylating CBCA. It appears that CBCA may be concentrated in plant parts other than capitulate-stalked trichome heads. CBC exhibits a range of effects, including antibiotic and antifungal infection in its early flowering phase. Like many cannabinoids, CBC is anti-inflammatory and analgesic. It has also shown antidepressant effects in animal testing.

Cannabinol/CBN: CBN is the oxidation byproduct of THC and amount the more common cannabinoids found in cannabis products. CBN is not produced by the cannabis plant but the presence of CBN is typically an indication of poor or long-term storage of cannabis products. CBN exhibits weak psychoactivity, but medical cannabis patients have reported that CBN appears to be synergistically sedative with THC. Like CBD, CBN may prove effective against MRSA infections. Further, a recent study indicated that CBN could potentially be useful in treating burns because it reduces perceived thermal sensitivity. These potential uses of CBN demonstrate that even the most poorly handled and stored cannabis may retain medicinal value.

Terpenes

<p>Myrcene</p>  <p>Aroma: Earthy, cloves, herbal Effects: Sedating, relaxing. Medical value: anti-inflammation, anticarcinogenic Also found in mango, lemongrass, hops and thyme</p>	<p>Linalool</p>  <p>Aroma: Floral, citrus, candy Effects: Sedation, anxiety relief Medical value: anti-depressant Also found in lavender</p>	<p>Limonene</p>  <p>Aroma: Citrus Effects: Stress relief, elevated mood Medical value: anti-cancer, anti-inflammatory, antiseptic Also found in lemons, oranges and juniper</p>	<p>a- Pinene b- Pinene</p>  <p>Aroma: Pine Effects: Alertness, increased energy Medical value: anti-inflammatory, antiseptic Also found in pine trees, rosemary, sage</p>	<p>Trans-Caryophyllene</p>  <p>Aroma: Pepper, woody, spicy Effects: pain reliever Medical value: anti-inflammatory, anti-cancer, antiseptic Also found in cotton, black pepper and cloves</p>
---	---	--	---	--

Terpenes are organic compounds that are found across many plant species and play a wide variety of roles. Whether they act as a stimulant, attractant, or deterrent; these beneficial compounds are crucial to the survival of cannabis plants. Although we don't see terpenes for their role in cannabis on an evolutionary level, we do appreciate them for their role in providing incredible aromas, mouth-watering flavors, and potentially medicinal effects.

Common Terpenes Found in Cannabis and Their Function

First, let's look into which terpenes are commonly found in cannabis and other plants.

- Pinene
- Limonene
- Myrcene
- Linalool
- Caryophyllene
- Ocimene
- Humulene

Pinene

Pinene is responsible for the pine aroma routinely found in cannabis strains. Unsurprisingly it's located in pine needles, rosemary, dill, and other aromatic herbs. Pinene is thought to be responsible for acute awareness and memory retention. Its medicinal benefits are related to reducing asthma, inflammation, and cancer cells.

Limonene

When you begin peeling the skin from citrus fruit, do you notice the smell that it emits? The terpene that's responsible for this bitter and pungent aroma is limonene. It's typically found on the fruit skin, peppermint, and other herbs.

Researchers have found that limonene is capable of elevating your mood and reducing stress. Medicinal benefits attributed to limonene is the reduction of inflammation, anxiety, and depression.

Myrcene

Myrcene is a terpene that's commonly found in indica strains, and they are potentially the cause of the "couchlock" effect. Although THC plays an active role in inducing a stoned feeling, myrcene is thought to be the reason why users become immobilized when consuming a large amount of this compound.

Myrcene is commonly found in lemongrass, hops, and mangos. It's been studied to leave users in a profoundly relaxed state. Medically, it's known for reducing insomnia and as its role as an antioxidant.

Linalool

When shopping for relaxing natural oils, teas, or soaps, most usually contain lavender. Linalool is the organic compound responsible for the scent that flows out of lavender plants, as well as cannabis. Due to its sedative nature, linalool provides cannabis users with a profoundly relaxing effect.

Linalool has been studied for its use in neurological diseases, insomnia, and in reducing anxiety.

Caryophyllene

Now we're getting to the spice section. Most pepper plants contain caryophyllene, which is a natural component of cinnamon, cloves, and

black pepper. This compound is a natural insect repellent, but it also is known for its stress reducing properties. Research is ongoing regarding caryophyllene, but it's been studied to reduce ulcers and treat chronic pain symptoms.

Humulene

Did you know that hops and cannabis are related? Then it shouldn't be a surprise that hops and cannabis both share this compound. Known for its "hoppy" flavor, humulene is known for its anti-inflammatory potential.

Ocimene

Ocimene is an extremely volatile organic compound that's found on mint, basil, and parsley. It plays a host of medicinal roles, such as fighting against bacteria, viruses, and fungus. This means that Ocimene is an antiseptic, which can clean wounds to prevent infection.

Terpene's Significant Role

As you can see, terpenes aren't merely responsible for the aroma and flavor of cannabis, but also play specific roles in the effects that we feel when consuming marijuana-based products. As legalization allows for more in-depth studies, terpenes will be better understood very soon.

Each of the different terpenes offer their own beneficial effects. Some of the most common medicinal benefits of terpenes help with the treatment of inflammation, stress, pain, and insomnia.

MICRODOSING CANNABIS

Microdosing is the act of taking what would have previously been thought of as sub-therapeutic doses of a medicine at regular intervals throughout the day. With higher doses, there can be unwanted side effects that can occur. Microdosing allows patients to reap the medicinal benefits to alleviate their symptoms without unwanted effects. With cannabis, and its primary psychoactive ingredient, THC, there is an interesting relationship between dosing strength and effect. This differs from many other more traditional pharmaceutical medicines.

For symptoms such as pain and anxiety, THC seems to have an effectiveness curve. At pre-dosing or extreme low dosing, there is little to no benefit. Then, as the dosage is increased to sub-therapeutic or microdosing levels, it begins to alleviate these symptoms. Often times with other medicines, increasing the dosage beyond this point produces an increased effectiveness. For example, if you have a headache, you take an aspirin. If you have a really bad headache, you take two aspirin.

Although, when it comes to managing pain with THC, increased dosages may instead lead to a decrease in effectiveness. As for anxiety, at low and microdoses, THC can be an effective anti-anxiety medication. But, at higher doses it can have the opposite effect, causing increased anxiety and even paranoia. Microdosing can alleviate these effectiveness-curve problems, while simultaneously helping patients to remain clear-headed so that they feel productive, sharp, and functional throughout the day.

How to Microdose

Finding the optimal dose can take some experimentation as every person will have a different tolerance and sensitivity to both THC and CBD, as well as differences within their own endocannabinoid system and their metabolism.

A typical starting microdose is between 1 and 3 milligrams of THC. Ideally this would be paired with an equal (1:1) dose of CBD to take advantage of both compounds' entourage effect. The entourage effect describes how different compounds work together to create a specific effect. Therefore, different strains will give different feelings and have different medicinal properties, despite having the same THC content.

The idea behind microdosing is that patients can achieve medicinal benefits they seek, such as pain or anxiety relief, improved appetite, or suppression of nausea, without feeling the psychoactive effects from the THC. This allows people to relieve their symptoms with little to no noticeable side effects.

The key when selecting the appropriate dose is to start low and go slow. Start at a dose of between 1 and 3 milligrams of THC and take this for three to five days. If symptoms persist, increase by 1-2 milligrams and continue again for three to five days. Once the desired level of relief is achieved, continue at that level. If symptoms return, increase slightly, but remember to keep your dosage just at or under the level where psychoactive effects become apparent. You should feel better, but not “high.”

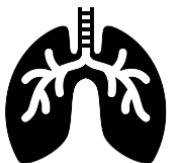
Onset of action:





the time required after administration of a substance for a response to be observed.

Duration of action: the length of time it takes for a substance to be effective.

Bioavailability: the degree to which a substance becomes available to the target tissue or body part after administration.

DELIVERY METHODS & DOSING

	Method	Onset	Duration	Bioavailability
	<u>INHALATION</u> Smoke or vaporize, medicine enters the bloodstream directly from the lungs.	Immediate	2 - 4 hours	10 - 35%

	<p><u>INGESTION</u> With oral use, absorption is slow & erratic, resulting in maximal plasma concentrations usually after 60 - 120 minutes.</p>	<p>30 minutes - 2 hours or more</p>	<p>6 - 8 hours</p>	<p>8 - 15%</p>
	<p><u>ORAL/MUCOSAL</u> Tinctures, lozenges dissolved in the mouth (not swallowed). Medicine enters the bloodstream through the mucous membranes.</p>	<p>15 - 60 minutes</p>	<p>4 - 6 hours</p>	<p>6 - 20%</p>
	<p><u>TOPICAL</u> Applied to the skin for local relief, usually in a salve or balm. Only local effects. Medicine does not enter the bloodstream.</p>	<p>15 minutes (non-psychoactive)</p>	<p>2 - 4 hours</p>	<p>n/a</p>
	<p><u>TRANSDERMAL</u> Patch or gel, designed to be absorbed through the skin and into the bloodstream.</p>	<p>15 minutes (possibly psychoactive)</p>	<p>12 hours (patch) 4 hours (gel)</p>	<p>100%</p>

EDIBLES DOSING CHART

THC CONTENT PER DOSE	WHAT TO EXPECT	WHO'S IT FOR?
1 – 2.5MG THC	<ul style="list-style-type: none"> • Mild relief of pain, stress, anxiety • Improved focus and creativity 	<ul style="list-style-type: none"> • First-time consumers • Microdosers
2.5 – 15mg THC	<ul style="list-style-type: none"> • Stronger symptom relief • Euphoria • May impair/ coordination and alter perception 	<ul style="list-style-type: none"> • Patients with persistent problems • Restless sleepers • Social butterflies
15 – 30mg THC	<ul style="list-style-type: none"> • Strong euphoria or unwanted effects in unaccustomed consumers • May impair conditions and alter perception. 	<ul style="list-style-type: none"> • Well-seasoned consumers • Medical patients with developed tolerance • Experienced consumers seeking to sustain sleep
30 – 50mg THC	<ul style="list-style-type: none"> • Very strong euphoria in unaccustomed consumers • Likely to coordination and alter perception 	<ul style="list-style-type: none"> • People who have poor gastrointestinal absorption • People that have a high tolerance to THC.
50 – 100mg THC	<ul style="list-style-type: none"> • Can cause extreme side effects such as 	<ul style="list-style-type: none"> • For experienced

	rapid heart rate, nausea and pain <ul style="list-style-type: none"> • Highly likely to impair coordination and alter perception 	THC individuals only <ul style="list-style-type: none"> • Patients with cancer, inflammatory disorders or conditions that necessitate high doses
--	---	---

CANNABIS CONCENTRATES

CANNABIS CONCENTRATES DEMYSTIFIED

The world of cannabis concentrates can be confusing, overwhelming and just plain other worldly. No longer are the days of just taking a bong hit, or smoking a joint, or if you really wanted to get crazy, indulge in some pot brownies.

Nowadays, smoking cannabis has gone a step further and marijuana extract processors and artisans have started creating new types of cannabis concentrates that can be ingested by vaping, dabbing, or waxing among other methods.

The following guide is going to explain the different types of cannabis concentrates that are out on the market, how they are made, and what exactly do you do with them.

Read on because Knowledge is Potent!

KIEF

Also known as dry sift or pollen, kief is made up of the resin glands found on the trichomes of cannabis flowers. These glands contain the terpenes and cannabinoids that bring a diversity of flavors and effects to various cannabis strains. Kief is commonly used to make hash, or you can collect kief in a grinder and sprinkle it onto ground cannabis for more potent consumption.

How is it made: Extracting kief is simple. Using a three-chamber herb grinder will help you finely grind your cannabis while letting kief crystals fall through a screen and collect into a small compartment. Kief is also collected in bulk during trimming after each harvest. Manual sifting of kief through graded screens isolates trichome heads and improves kief purity.



What do you do with it?

- Sprinkle Kief Into a Joint or Roll a wax Joint
(lick the joint and roll the top 1/3 in the kief)
- Make hash
- Make moon rocks
- Press rosin
- Add potency to Cannabutter

Typical Potency Range: THC 20-60%

Can the Beacon or Profiler I measure it? Yes.

HASH

Hash, also known as Hashish, is one of the oldest players in the cannabis game. It is a concentrate made by compression of the plant's resin. The powdery kief that coats your cannabis flowers can be collected and pressed together to form hash, or solvents like ice water or ethanol may be used to more effectively strip the plant of their cannabinoid-loaded crystals.

Though not as potent as BHO and other cannabis concentrates, hash remains a staple of cannabis culture around the world.



How is it made: Making hash at home today is as easy as purchasing a few inexpensive ingredients from a hardware store. You can even purchase ready-made screens for dry extractions, presses for old school brick hash preparations, or even bags for water extractions all online. To learn how hash is made, click here: <https://youtu.be/aGm1Ssq9u2s>

What do you do with it?

- Consume orally as a solid
- Infuse into a beverage such as the traditional Indian drink bhang.
- Smoke, either on its own or as a way to accompany traditional cannabis flowers.
- Vaporize on a hot surface, otherwise known as dabbing.

Typical Potency Range: THC 40+%

BHO (Butane Hash Oil)

BHO, or butane hash oil, is an extremely potent concentrate popularly consumed for dabbing and other vaporization methods. Cannabinoids are drawn out of the plant through butane extraction, which leaves behind a wax that will either maintain its sticky consistency or harden up, resulting in a crumbly "honeycomb" or a glasslike shatter. "This method was popularized due to the ability to extract



some terpenes along with the primary cannabinoids. Always be sure that your oil is lab-tested for purity, as improperly purged BHO may contain traces of

butane.

How is it made: <https://cannabistutorials.com/make-bho-butane-hash-oil>

What do you do with it?

- Make Shatter
- Make Wax
- Make Crumble
- Vaporize it so you can "do a dab"

Typical Potency Range: THC 60-90%

HASH, ICE WATER HASH, COLD WATER HASH, FULL MELT

The granddaddy of concentrates for the older crowd, bubble hash has begun to wane in popularity as stronger concentrates with more advanced technology take over dispensary shelves. As with butane, CO2 and rosin extraction, making bubble hash involves separating THC from plant matter, but instead of using a solvent like butane or CO2, this process uses ice water. When purchasing bubble hash or dry sift, it's important to pay attention to the star rating to understand what you're buying. For example, you might come across "6-star bubble hash" and wonder what the six stars stand for. The stars are a purity rating system from 1 to 6, with one being the poorest in quality. Five to six-star is what we would call full melt extracts, often used for dabbing. Three to four stars is considered half melt and should be pressed into rosin before dabbing, or added to a blunt or bowl. One to two-star hash is better used for cooking.

How is it made: The most common way to make bubble hash is by putting the marijuana in mesh bags and then filtering a mixture of the plant matter, ice and water through them until a slurry collects at the bottom. After it dries, you have bubble hash.

<https://www.youtube.com/watch?v=IXsfCBogMmw>

What do you do with it?

- Crumble it over a bowl
- Roll it into bars
- Mix it into joints.

Typical Potency Range: THC
40-80%



PHO (Propane Hash Oil)

Concentrate derived from a propane-based extraction is referred to as Propane Hash Oil, or PHO for short. Although others are possible, the consistency of PHO is typically budder. The process of propane extraction is very similar to butane extraction, the primary difference is simply swapping butane for propane. Propane extractions run at higher pressures, stripping different ratios of plant waxes and oils than butane which, depending on the strain, can deliver less residuals and higher levels of terpene preservation. Propane has a lower boiling point than



butane, which allows for a lower purging temperature for PHO and results in the buddery consistency as opposed to shatter. Note that some extraction companies utilize a blend of propane and butane

How is it made: <https://youtu.be/ugKaUwkG2Yw>

What do you do with it?

- Make budder
- Make wax
- Make crumble
- Vaporize it so you can "do a dab"

Typical Potency Range: THC 60-90%

Can the Beacon or Profiler II measure it? Yes.

SHATTER, SAP, PULL N SNAP

Shatter is the common name for the stable and glass-like concentrates that more than likely will break into many pieces when dropped on a hard surface. Some shatter has some adhesive properties to it, while other kinds will be smooth to the touch. A lot of people try to find shatter because its crystalline nature



implies purity. Heat, moisture, and high terpene contents can also affect the texture, turning oils into a runnier substance that resembles sap (hence the commonly used nick name "sap"). Oils with a consistency that falls somewhere between glassy shatter and viscous sap are often referred to as "pull-and-snap."

How is it is made: <https://www.youtube.com/watch?v=TgjDwFjgVWc>

What do you do with it? Vaporize it so you can "do a dab"

Typical Potency Range: THC 80-90%

Can the Beacon or Profiler II measure it? Yes.

BUDDER

Budder, a wax-concentrate variety, is one of the most popular forms of concentrates in Colorado dispensaries right now. Typically extracted with hydrocarbons, budder is made by using a chemical solvent to "blast" through marijuana to extract the THC, which is then "purged" with heat and air pressure to remove the solvent. The same broad process is used to create shatter and crumble wax, but the results are very different.



How is it made: Budder wax is made when the extracted cannabinoids begin to crystallize after being agitated during the extraction process. By purging it at a higher temperature or whipping it like a batter in the middle or at the end of purging, a shatter-like concentrate can turn into the waxy substance. Delicately but intently whipping the concentrate and maintaining a specific purging process can create beautiful, fluffy varieties of budder, but it doesn't make it more potent.

What do you do with it?

- Vape it
- Dab it or
- Wax it

Typical Potency Range: THC 60-80%

WAX

Cannabis wax refers to the softer, opaque oils that have lost their transparency after extraction. Unlike those of transparent oils, the molecules of cannabis wax crystallize as a result of agitation. Light can't travel through irregular molecular densities, and that refraction leaves us with a solid, non-transparent oil.



Just as transparent oils span the spectrum between shatter and sap, wax can also take on different consistencies based on heat, moisture, and the texture of the oil before it is purged (the process in which residual solvents are removed from the product).

How is it made: To make wax, marijuana buds are packed into tubes and then blasted with butane. The exposure to butane extracts the hash oil. For the safety of the user, the excess butane must then be evaporated. Lastly, oils are purged with heat. The gooey substance left behind looks like wax, hence the name.

Again, for many reasons, this is not a process you should try at home. Butane gas is highly flammable, and without proper ventilation, a chemical explosion is always a possibility.

<https://youtu.be/z0muOTEAPG4>

What do you do with it: Vaporize it so you can "do a dab"

Typical Potency Range: THC 60-80%

CRUMBLE

Crumble wax is made with a procedure very similar to those that create shatter and budder, but the pre-purged oils used for crumble generally have more moisture, a different



temperature and a thicker consistency, which help create the wax's crumbling, cheese-like body after the purging process.

How is it made: A popular way to make wax into crumble is purging for a longer time at a lower heat, which preserves more terpenes and makes for a better-tasting concentrate.

Crumble wax is difficult to handle, so it's often a less desired concentrate than shatter and budder, but it's still the preferred option of many tokers.

<https://www.youtube.com/watch?v=VBgH AoV7srg>

What do you do with it?

Typical Potency Range

THC 60-90+%

LIVE RESIN

Live resin concentrates are made with the same extraction methods as those listed above, but live resin carries more intense, complex smells and flavors than traditional waxes, shatters and oils. Why? Instead of extracting from dried trim or cured buds, live resin is run with plants



that are cryogenically frozen right after harvest – preserving oils, cannabinoids and terpenes that are generally lost during the curing and aging processes.

Although it is possible to make live resin with CO2 extraction, most, if not all, varieties that you'll see in dispensaries are run with butane, shatter being the most popular. Live resin's strong flavor profiles give it a higher price tag than other concentrates, it's a rare treat for most. But pre-filled, live-resin vaporizer cartridges are starting to emerge on the commercial side, so it might become more prevalent in the future.

How is it made: <https://youtu.be/AQmkxiTlaSQ>

What do you do with it: Drop it in your vape pen or dab it.

Typical Potency Range: THC 60-80% but high terpene content.

CO2 Oil

Hot on the market is CO2 oil, a concentrate made possible by expensive botanical extractors that use pressure and carbon dioxide to separate plant material. This method, called supercritical fluid extraction, is one of the most effective ways of reducing cannabis to its essential compounds.



The amber oil it produces can be vaporized in a variety of ways, one of the most popular being portable vaporizer pens. Among the industry's best sellers are disposable cartridges containing CO2 oil and a medical-grade solvent like polypropylene glycol, which gives the oil its liquid consistency.

How is it made: https://youtu.be/fYMCA_Tg_vk

What do you do with it?: Smoke it using a vaporizer pen.

Typical Potency Range: THC 25-70% when pure

ROSIN

Rosin refers to an extraction process that utilizes a combination of heat and pressure to nearly instantaneously squeeze resinous sap from your initial starting material. The term "rosin" originated as a method of making a product used to lubricate violin bows. With cannabis, this method is incredibly versatile in that it can either be used with flowers or to clean up hash and kief into a full-melt hash oil. The result is a translucent, sappy, and sometimes shatter-like product. If executed correctly, rosin can rival the flavor, potency, yield of other solvent-based extraction products.



How is it made: Rosin has quickly risen in popularity on the underground scene because of how easy it is to make. Producing rosin at home only requires some nugs, a hair straightener and parchment paper. The heat and pressure of the hair straightener pushes the resin glands out of the buds onto the paper, leaving pools of THC oil that produce potent dabs.

- <https://www.youtube.com/watch?v=SQVogwcVStc>

What do you do with it: Dab it.

Typical Potency Range: THC 50-70%

RSO (Rick Simpson Oil) aka Phoenix Tears

In 2003 a man named Rick Simpson treated his skin cancer using a homemade remedy made from cannabis. By soaking the cannabis in pure naphtha or isopropyl alcohol, the therapeutic compounds are drawn out of the plant, leaving



behind a tar-like liquid after the solvent fully evaporates. Also known as Phoenix Tears, Rick Simpson Oil (RSO) can be orally administered or applied directly to the skin. Many other businesses now sell their own renditions of the Rick Simpson Oil, some of which are high in THC while others contain only non-psychoactive compounds like CBD.

How is it made: <https://youtu.be/KZXGH6mYr3Y>

What do you do with it?

- Put it in edibles
- Eat it as is
- Put it in capsules
- Not great for smoking, vaping or dabbing

Typical Potency Range: THC 20-70%

CBD ISOLATE

CBD isolate is what it sounds like: the extraction of CBD from the cannabis plant so that the subsequent product is "pure" CBD. Companies that do this use some kind of extraction process, likely CO2. They remove unwanted plant material from the extraction.



To activate that CBD, the extraction will be decarboxylated, or heated so that the acidic form of the cannabinoid (CBD a) will convert to the non-acidic form (CBD). The final product is quite beautiful. CBD isolate will look like snowy, white crystals.

How is it made: <https://youtu.be/oa-HfwJCqTg>

What do you do with it: At this point, the substance can be consumed directly; since it has already been decarbed, it does not need to be smoked, vaped, or dabbed, although you can ingest it this way. It can be added to a drink, infused in cooking, or even applied topically.

Typical Potency Range: CBD 90-99%

DISTILLATES

Distillates are made through a process called molecular distillation. Distilling hash requires taking winterized concentrates - butane or CO2 hash oil refined with alcohol or ethanol and then chilled at extreme temperatures - and then distilling them to concentrate the THC Further. Commercial extractors use a machine called a "wiped film evaporator,"



which takes advantage of the different boiling points in cannabinoids to thermally separate them.

The process is repeated to remove any impurities, such as leftover solvents or lipids, in the concentrate. The result: a clear, odorless concentrate virtually free of solvents.

Distillation can take BHO or CO2 oil to make it 85 percent THC potency.

How is it made: Distillates use an extraction process called “short path distillation” sometimes referred to as “molecular separation” that separates and refines molecules and contaminants to create a clean, almost clear concentrate. Other extraction methods don't produce nearly the same purity level or variety of uses as this technique, making it highly regarded as a “top-shelf” concentrate. The percentage of THC {Tetrahydr0cannabinol} and CBD {Canna- bidiol} in the distillate depends on the strain of cannabis or hemp trim used in your cannabis extraction process. Your cannabis or hemp trim needs to be turned into winterized BHO [Butane Hash Oil] or winterized CO2 Oil concentrates through an extraction process before you can begin distilling.

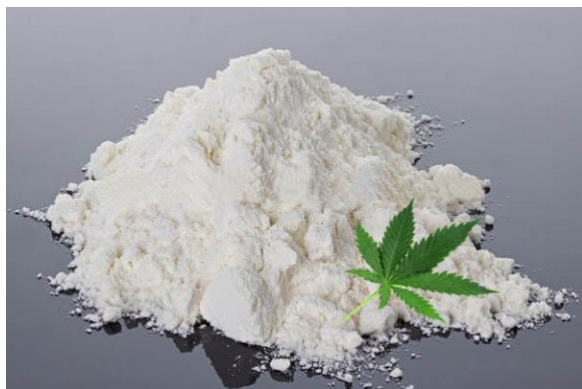
What do you do with it: Dab it.

Typical Potency Range: THC 70-95%

THC ISOLATE / Crystalline

THC a Crystalline was developed as a means of delivering large, quantifiable doses THCa and is known as the purest isolate anywhere on the market testing at 99-100%. This pure THC a converts to THC when vaped and creates a clear and highly cerebral effect, or remains non-psychoactive when ingested.

How is it made: <https://www.youtube.com/watch?v=v8yjnVcrHBY>



What do you do with it?

- Dab it if you want to get high
- Ingest it with food or drink if you don't want the psychoactive "stoned" effect

Typical Potency Range: THC 90-99%

Solvent vs. Solventless Extractions

Cannabis concentrates can be divided into two main categories: solvent and solvent less extraction. A solvent is a substance that dissolves a solid, resulting in a liquid solution. When we talk about cannabis concentrates, popular solvents include: butane, propane, CO2 and alcohol. Although water is technically a solvent, ice-water extractions are typically classified a non-solvent extraction in the cannabis world. Solvent less extractions do not introduce any foreign substances (except for water)

Many people refer to concentrates by their consistency, i.e. shatter, budder or wax. However, the consistency of a concentrate alone does not indicate which extraction Technique was used. The same extraction method can deliver a variety of final product Consistencies. The method of extraction and the starting material is far more important Than the concentrate's final consistency, as there are several variables that manipulate. The consistency; some are in control of the extraction artist, while others are not.

Solvent-based extractions typically produce concentrates that are known as oil. If Made properly, this means the concentrate will be free of plant matter (also known as Contaminate). These oils will melt and

vaporize to nothing — meaning very minimal Residue will remain on the nail if dabbed, for instance. The consistency of solvent-based Cannabis concentrates varies greatly based on a few factors: strain of cannabis, grow Conditions, curing environment, extraction technique, solvent used, purging process and Equipment used all play a role in the final product.

It's your responsibility as a thoughtful consumer to inquire from your budtender about. The starting material and extraction process used in your favorite concentrate, so you can Make the best decision about which concentrate is right for you.

THE MEDICINE LAB

We take quality and safety very seriously. That is why we have created our very own 3-phase MDBX Certification Process. This is to ensure our flower and concentrate products are the safest on the market.

The MDBX Certification Process guarantees that a given product has been made safely without the use of pesticides and herbicides, and that it has undergone a quality control process to be tested. The certification also indicates that the majority of the ingredients of a given product were sourced and manufactured Indigenously, and that a portion of the proceeds are returned to the community through a voluntary donation program.

The Medicine Box's 3 Phase MDBX Cannabis Testing Certification Process.

Here at The Medicine Box Cannabis Dispensary in Kanesatake (Oka), we take quality and Cannabis use and safety very seriously. That is why we will be one of the very few dispensaries in Canada to test our flower and concentrate products on-site and in our own lab.

The MDBX certification process was created to ensure that a product is thoroughly checked and will give our clients a closer look at the Cannabis product.

1st Phase - Microscopic inspection: Our Lab Technician will check for foreign unwanted additives and bud quality with a 90x zoom stereo magnification microscope. The microscope offers high resolution, 2-1/2" (65mm) super widefield of view, 26:1 large magnification zoom range and 8" (200mm) long working distance, as well as provides crystal clear sharp images. The 80-LED ring light offers bright, cool and even illumination for optimal viewing. The protocol checks for bud rot, mold patches and unwanted additives such as Fentanyl, cocaine, bigger parasites and their residues. The process will also give us a general view of the colour, transparency and ultimate quality of the trichomes.

Only if the sample receives a passing grade from phase 1 will it be eligible to continue to the next phase.

2nd Phase- Toxins Test: This test utilizes lateral flow assay technology that detects the most common hazardous pesticides, insecticides and fungicides. The equipment has been calibrated to conform to the include a total of 66 toxins that are on the Health Canada cannabis safety code. This phase will test a broad spectrum pesticide screening for total toxicity of the product. The equipment is designed to give either a pass or fail grade.

Only if the sample passes the first 2 phases will it be eligible for the 3rd and final phase.

3rd Phase - THC/CBD testing: If the sample gets a passing grade on the first two phase will it be approved for the 3rd and final phase. Our Lab technician will use our spectroscopy-based potency analyzers to check for THC-A, Delta-9 THC, Total THC, Total Potential THC, CBD-A,

CBD, Total CBD and Total Potential CBD. This will give an indication of the potency of the product.

Only if a sample gets a passing grade in all 3 phases, will it be considered MDBX Certified. All products that are MDBX certified will be clearly marked.

ELDERS AND CANNABIS

The elderly population is increasingly using cannabis medically. Some studies suggest that they may in fact be the fastest-growing demographic to use medicinal cannabis.

As access and information become more open, many elders are increasingly choosing cannabis over pharmaceuticals. However, elders are perhaps the most underserved group when it comes to medicinal cannabis. Until recently, cannabis and cannabis-derived products have been difficult to access for seniors, in part because of the deep stigma around cannabis that most seniors have grown up with.

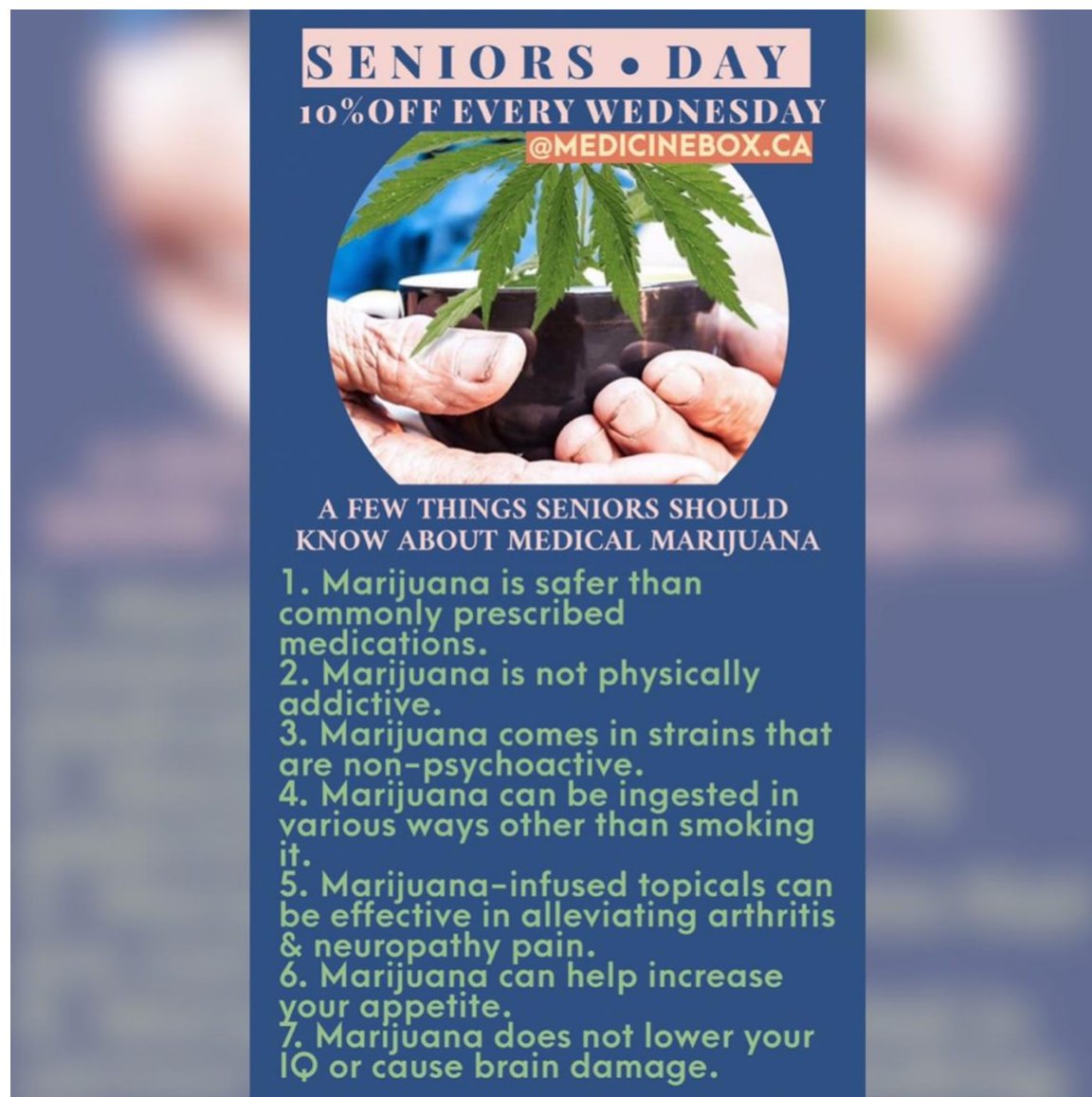
Cannabis is a plant that has the potential to not only treat, but also cures illness. The potential lies in the fact that medicinal cannabis users can become their own healers. This is because cannabis is in fact the most powerful healing plant and simultaneously among the safest plant therapies. It is impossible to overdose on cannabis.

For seniors wishing to take charge of their own healthcare, gaining freedom from the pharmaceutical industry is possible, and can be relatively simple, with access to medical cannabis.

We are aware of how much information is out there on medicinal cannabis and the information about the active elements of the plant and what it treats must be clear and concise. Having access to a

comprehensive set of information about CBD (cannabidiol) and THC, emphasizing the importance of CBD as the key medicinal chemical compound found in cannabis is at the top of our list of priorities when faced with the elderly population.

We believe in a wide range of approaches for the elderly, where THC can be used in a way that is comfortable for them. For those suffering from arthritis, specifically in their hands, or those who suffer from respiratory issues, opting for non-smoking options for THC use is ideal. For those who are not familiar with or have challenges with rolling joints, there are many alternative options for use such as pre-roll joints, bongs, pipes, vaporizers, edibles, tinctures, and more.



SENIORS • DAY
10% OFF EVERY WEDNESDAY
@MEDICINEBOX.CA

A FEW THINGS SENIORS SHOULD KNOW ABOUT MEDICAL MARIJUANA

1. Marijuana is safer than commonly prescribed medications.
2. Marijuana is not physically addictive.
3. Marijuana comes in strains that are non-psychoactive.
4. Marijuana can be ingested in various ways other than smoking it.
5. Marijuana-infused topicals can be effective in alleviating arthritis & neuropathy pain.
6. Marijuana can help increase your appetite.
7. Marijuana does not lower your IQ or cause brain damage.

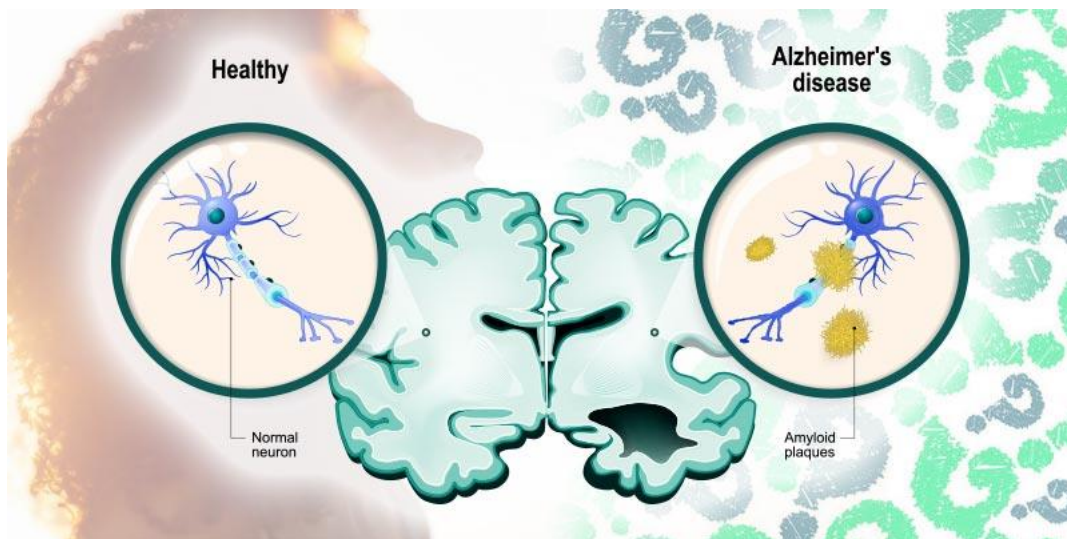
Our aim when we encounter the elderly population is to express that cannabis is not always about the need or want to “get high.” Being introduced to the uses, effects and side effects of edibles is first and foremost the goal in informing our elderly patients. In small amounts, THC edibles can minimize the experience of feeling “high” and achieve the necessary medical benefits. For elders, dealing with insomnia, eating edibles before bed has long-lasting effects that will help produce restful sleep through the night.

Another interesting topic that elders would benefit from is the role of terpenes. Terpenes are essential to the treatment of illness through self-medication. Terpenes release the unique aroma identity of any cannabis plant. Becoming familiar with each strain’s aroma will allow patients to identify the best therapeutic strain of cannabis.

MEDICAL USES OF CANNABIS

Alzheimer’s Disease and Dementia

Symptoms: Dementia is the umbrella term used for a chronic persistent disorder associated with a loss of memory and cognitive abilities; symptoms associated with the various disorders become serious enough that they interfere with daily tasks. Alzheimer’s is just one such disorder, and it is the leading cause of dementia, accounting for 60% to 80% of cases. This disease is associated with old age, an irreversible progressive disease that destroys memory and thinking skills. Early-onset Alzheimer’s can occur between a person’s 30’s and mid-60s.



Benefits: Cannabis is widely known for its anti-inflammatory properties. This property is just one of the benefits that cannabis can offer to those suffering from dementia. Inflammation surrounding the toxic plaque buildup within the brain is thought to be one of the causes of Alzheimer's. Cannabinoids bind to receptors in the brain and decrease the inflammation within these areas and thus slow the progression of the disease. Other studies have shown that small doses of THC slow the development of certain proteins also thought to contribute to the progression of Alzheimer's.

Although limited studies have been able to show that CBD can prevent cell death which can occur slowly over time with Alzheimer's, it also has neuroprotective, anti-oxidative, and anti-apoptotic properties. People who suffer from psychiatric symptoms, CBD is a better route as it is used to treat anxiety and won't leave any noticeable psychoactive effects, where THC can exacerbate symptoms of psychological disorders.

The most promising use for cannabis is for the alleviation of various symptoms associated with dementia as well as the promotion of

positive things such as appetite stimulation, weight control, motor function, and mood regulation.

Treatment: Both THC and CBD can be used to treat Alzheimer's. Though THC does produce temporary psychoactive effects, low doses have shown promise in slowing the progression of dementia. THC microdosing can be administered on the progression of the disease. Always start small and work your way up. Various terpenes work in an entourage effect with the cannabinoids and also have beneficial effects. Look out for strains that're high in Pinene, a terpene effective on memory retention.

For those with more serious psychiatric symptoms, CBD allows for treatment of dementia symptoms without the "high" effect or risk of paranoia associated with THC. CBD can be taken similarly to THC through smoking, edibles, oils, and tinctures.

When combining treatments with CBD, THC, terpenes, and other cannabinoids, we see the entourage effect occur where all the terpenoids and cannabinoids work together to provide a full range of therapeutic benefits.

Recommended method of intake: smoking, vaporizing, London Donovan 300mg/900mg THC/CBD tinctures, Treat Leaf edibles, Baked Edibles capsules.

Anxiety and Stress

Symptoms: Stress and anxiety are feelings of apprehension that most of us experience at some point of our lives and when not managed properly, these feelings can be draining on a person's daily activities.

Anxiety is a reaction that occurs when stress is anticipated; it is a general state of fear, worry or unease. Stress and anxiety can bring about symptoms such: insomnia, heachaches, low energy, gastrointestinal and digestive problems, chest pain or trouble breathing, frequent illnesses, muscle tension and irritability.

Benefits: When choosing a cannabis for treatment of anxiety and stress the correct strain as

well as cannabinoid

type is very

important to

consider. CBD acts

on the serotonin

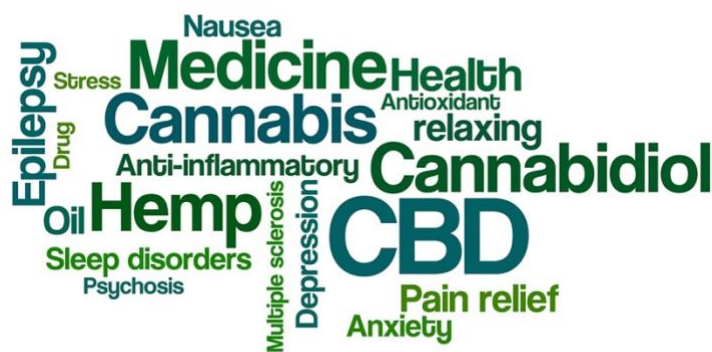
receptors in the

brain which boost

mood and even

regenerate brain cells that may be damaged due to high cortisol levels from chronic stress. CBD has anti-anxiety properties as well as anti-psychotic characteristics which help mitigate unwanted mental effects of stress. Strains that are high in THC can cause temporary paranoia and may exacerbate anxiety in some individuals. High THC strains should be avoided when first treating stress and anxiety with cannabis.

It is important to note that there are certain strains that contain very low doses of THC, CBD only, or have a 1:1 CBD/THC ratio that have been shown to alleviate stress and anxiety, especially if the anxiety or stress is caused by other physiological symptoms. THC is an excellent analgesic and is used to treat a wide array of ailments, therefor THC's



ability to alleviate the symptoms of the underlying ailments can help reduce stress and anxiety.

Various terpenes in different strains will also affect how someone feels. Selecting a strain high in limonene, which energizes and elevates mood, can boost resilience to stress and anxiety. Strains higher in myrcene and linalool will have calming and relaxing effects.

Treatment: The most effective treatment for stress and anxiety is with CBD, the non-psychoactive ingredient in cannabis. CBD can be administered using various methods depending on preference. If anyone has inexperience or concerns about the psychoactive effects of cannabis, it highly advised to start off with strains or products that contain CBD only. Over time, low levels of THC can be incorporated. However, if using THC, try to select strains higher in linalool and/or myrcene. The terpene known as beta-caryophyllene also shows promise as it helps reduce anxiety, depression, and can help shield against paranoia experienced by some users.

Recommended method of intake: CBD oil, smoking vaporizing, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules; oils like the Mukwa Wellbeing and Balance, London Donavan 300mg/900mg CBD tinctures

Arthritis

Symptoms: Arthritis refers to joint pain/inflammation or joint disease of which there are many different types. There are two main types of arthritis:

1. Rheumatoid arthritis – when the body’s immune system attacks the lining of the joint capsule, which then becomes inflamed and swollen.

2. Osteoarthritis – the most common form of arthritis, a degenerative condition caused by aging bones, obesity, or injury.

Symptoms can range from mild to severe and can cause permanent joint changes including: joint swelling, pain, stiffness, redness, tenderness and warmth; fatigue; decreased range of motion.

Benefits: Cannabis has shown to be beneficial to those suffering from any form of arthritis due to its anti-inflammatory properties and its regulation of pain. People suffering from RA find it alleviates pain, reduces inflammation, and aids with sleep. With the use of cannabis, patients have reduced or even eliminated their use of pharmaceutical drugs, which means eliminating the negative side effects and risks that come with them.

Osteoarthritis does not have a cure but through its pain regulation and anti-inflammatory properties, cannabis can improve the overall quality of life.

Treatment: A combination of CBD and THC is most effective, subject to time and usage as well as pain intensity. Strains higher in CBD help with pain management and inflammation throughout the day without any psychoactive effects.

Strains higher in THC are much stronger analgesics and are better suited for the night as they help with sleep as well as pain, but they do have a temporary



psychoactive effect. Micro-dosing with tinctures with trace amounts of

THC can be used throughout the day as they provide more pain relief than just CBD, but still allow for a clear head.

Treatment can also include a combination of methods such as inhalation, edibles and topical use. Inhalation delivers rapid pain relief although it does not last as long. When smoking, strains with terpenes caryophyllene and myrcene will work synergistically with the cannabinoids to alleviate more pain. Topicals can be placed on the hands or superficial joints where the creams can penetrate deep enough to reach the arthritic joint. Tinctures can provide longer lasting relief and can be micro-dosed throughout the day to provide relief from deep joint pain.

Recommended method of intake: Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules; oils, smoking and vaping. Specific tinctures available include Mukwa Day-time Pain and Balance. Topical methods include Mukwa Releaf stick, London Donovan 300mg/900mg CBD tinctures, Giid Healing Salve, Miss Envy Botanicals Buddha Bar, Bella Vita Bath Bombs

Cancer

Symptoms: Cancer is the second most common cause of death in Canada. It is a disease in which certain cells of the body divide uncontrollably. This uncontrollable division of cells leads to lumps or cell masses known as tumors. Cancer can start in any part of the body. Malignant tumors can invade neighboring tissues. Cancer is caused by a genetic error within the cells which then leads to uncontrollable divisions; this genetic change can either be inherited or can occur due to certain environment causes such as chemicals or radiation.

Symptoms and severity will vary between the various types of cancers; some have no symptoms, while others have more severe symptoms such

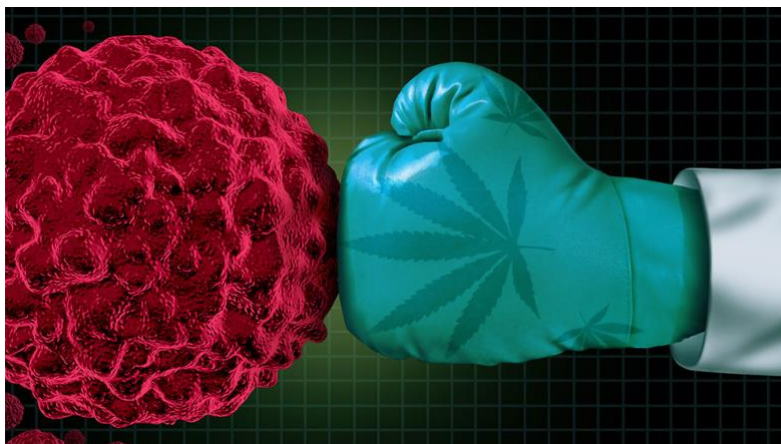
as : persistent cough, change in bowel or urine, anemia, abnormal lumps, fatigue, unexplained weight loss, pain.

However, some cancers are symptomatic and many of the side effects that are associated with chemotherapy and radiation are actually the cause of uncomfortable symptoms such as: skin damage, edema, pain, tiredness and fatigue, anemia, appetite loss, thrombocytopenia (bleeding and bruising), constipation or diarrhea, hair loss, infection, lymphedema, nausea/vomiting.

Benefits: Due to its ability to activate the CB1 receptors in our bodies, THC works wonders for those struggling with appetite, nausea, vomiting and pain. Indica-dominant strains with THC help relax the body and are used to combat insomnia for those struggling with night time pain and discomfort. Unlike with other pain and sleep medications, there is no risk of overdose or addiction.

For those first starting off with cannabis, CBD can be used for inflammation, stress, anxiety and depression. Though CBD itself is not as strong of an analgesic as THC, beginners can work their way up over time with different combinations of THC and CBD. Cannabis can help improve the overall quality of life for someone battling cancer.

THC has shown to be able to kill cancerous cells. However, this has only been done in laboratory studies with petri dishes; these studies are limited and have not



yet been applied to human testing. Therefore, those treating cancer with cannabis should always consult their doctor. There are claims,

though, that treatment with cannabis, specifically with RSO (Rick Simpson Oil) has helped cure people's cancer, and there are many anecdotal studies which support this, particularly for skin cancer when applied topically.

The most studied benefits of cannabis have been for symptom management, whether it be side effects of radiation or chemo therapies, or symptoms from the cancer itself.

Treatment: Rick Simpson Oil (RSO), sometimes known as Phoenix Tears, is an extremely concentrated cannabis oil, with high levels of THC (55%-60% and up to 10%-12% CBD) that has been widely used for the treatment of cancer. Depending on the cancer, RSO is either taken orally or topically. The prescribed treatment with RSO lasts 90 days and the patient's goal is to gradually consume 60 grams of RSO within this time.

ORAL TREATMENT WITH RSO

Week 1: start with three evenly spaced doses per day, each about half the size of a grain of rice.

Week 2 – 5 : double your dose every four days.

Week 5 – 12 : take one gram of RSO per day until the full 60g has been consumed. Patients should be taking about 8 – 9 rice sized drops every 8 hours, until treatment is completed.

Topical treatment with Rick Simpson Oil:

Apply a drop of RSO onto the affected area. Completely cover with a bandage and keep covered for 3 – 4 days. Within this time only change bandage if necessary. Repeat this until spots have disappeared.

As mentioned above, the side effects of chemotherapy and radiation therapy are very intense, and already doctors are prescribing cannabis to help those suffering from treatment side effects.

Though THC does have temporary psychoactive effects, it provides strong relief from pain and general discomfort with zero risk of overdose or addiction, unlike opioids or many other painkillers. High THC products help stimulate appetite, control weight loss, ease nausea and vomiting, as well as help those who struggle with sleep. THC stimulates the CB1 receptors which influence sleep, mood appetite, memory, and pain; therefore, it can confer many benefits during the treatment of cancer.

CBD on the other hand is used for treatment of stress, anxiety, and depression, all of which are psychological disorders that are often associated with serious and life-threatening illnesses. We recommend ingesting cannabis products orally either via edibles, oils or tincture drops. This will provide more of a long-lasting bodily effect and provide widespread relief.

Recommended method of intake: RSO (Rick Simpson Oil), Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules; Mukwa Daytime Pain, Mukwa Nighttime Pain, Mukwa Sleep, Mukwa Wellbeing, Mukwa Releaf Stick.

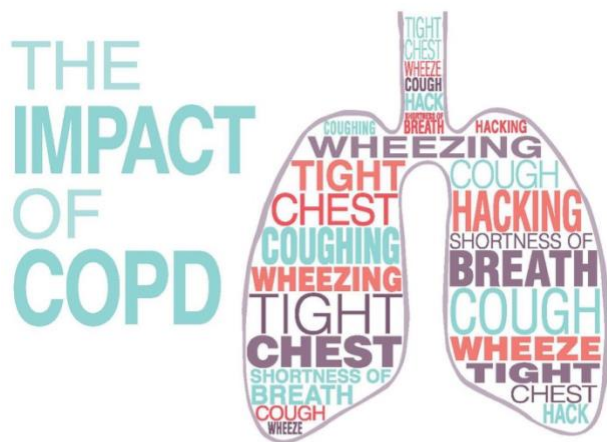
COPD

Symptoms: Chronic obstructive pulmonary disease is an umbrella term for progressive lung disease characterized by – breathlessness, wheezing, chest tightness, excess mucus, chronic cough.

Benefits: Symptoms of COPD are all characterized by inflammation within the lungs caused by disease. The anti-inflammatory properties of

cannabis, specifically CBD, reduce inflammation within the lungs that causes many of the symptoms associated with COPD. Some studies have shown that low levels of CBD have helped treat nicotine addictions as well. Nicotine has been shown to lead to the development of COPD and worsen the symptoms, so cessation of smoking is an important step in combating COPD.

Treatment: Strains containing both THC and CBD are effective in the treatment of inflammation. THC was found to deactivate inflammatory proteins where CBD has continued to reduce the amount of inflammation. Ingestion through edibles or oils is



Most common cause of hospital admissions in Canada

WORLDWIDE
AFFECTS
300
MILLION



LIVES CLAIMED
3
MILLION
PER YEAR

THE CENTRE FOR HEART
LUNG INNOVATION IS RANKED



FOR
PULMONARY
DISEASE
RESEARCH

4TH
Leading cause of
DEATH in Canada

Treatment costs in
BC are estimated
to be over
600
MILLION
PER YEAR



An online predictor
created by St. Paul's
and UBC is expected
to cut down on costs
for treating COPD
in Canada



A St. Paul's pilot project helping
COPD patients better manage
their disease could result in

9600
FEWER
ED
VISITS

6200
FEWER
HOSPITAL
VISITS

OVER A 5-YEAR PERIOD

SOURCES • bcguidelines.ca • Global News • Health Central • Respiratory Guidelines • Statistics Canada • Vancouver Sun • World Health Organization

recommended due to the nature of COPD. Smoking as well as vaporizing may irritate the lining of the lungs, so these methods of intake are not preferred. However, if you were to choose to vaporize with strains that are high in the terpene Pinene. Due to the fact that this terpene acts as a bronchodilator, this will decrease resistance in the airway and increase airflow to the lungs.

Recommended method of intake: Mukwa Wellbeing and Balance tinctures, CBD oil, 1:1 oil, London Donovan CBD/THC 300mg/900mg Tinctures, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules.

Crohn's and Colitis

Symptoms: Colitis is an inflammatory disease that occurs within the inner lining of the colon. Crohn's is quite similar to Colitis but can appear anywhere within the digestive tract and often affects all layers of the bowel walls. Those suffering from Crohn's or colitis may experience – abdominal cramping and pain, weight loss and reduced appetite, fever, fatigue, anemia, inability to defecate, or diarrhea, and pain due to inflammation.

Benefits: The benefits of using cannabis for the treatment of Crohn's and Colitis is that it offers relief from pain associated with cramping and inflammation, as well as general pain. The anti-inflammatory properties of cannabis, especially CBD, reduce inflammation within the colon and the digestive tract. This in turn allows the body to properly digest food and allow for regular bowel movements.

Patient's with Crohn's can sometimes suffer from "opportunistic" infections. CBD has antibacterial properties which may help with the prevention of these infections.

Treatment: Strains high in CBD (4% or higher) help reduce severe inflammation and discomfort within the digestive tract. Products containing doses of 30mg of THC and 15mg of CBD (2:1 ratio) have been shown to be the most beneficial in treating overall symptoms of Crohn's and colitis.

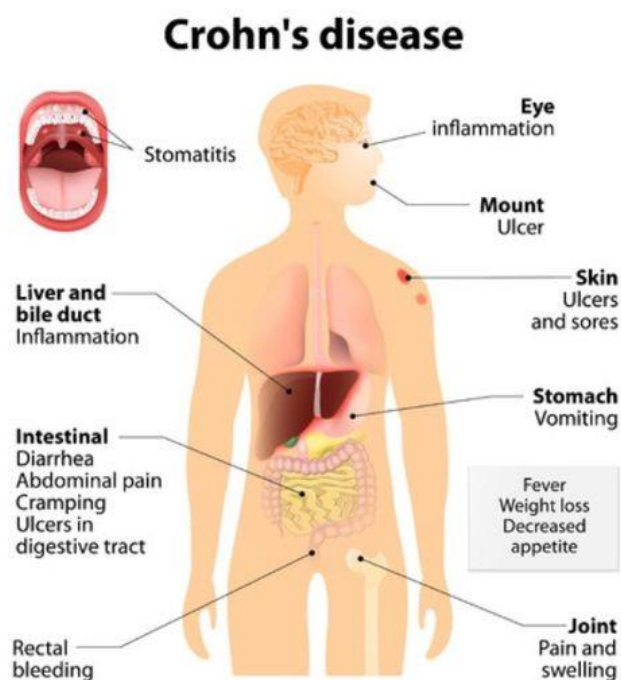
Other options include topicals, which can be applied to the abdominal area to decrease pain and intestinal motility.

Juicing the raw leaves of cannabis allows for an intake of THC-A, reducing the inflammation and symptoms associated with Crohn's. it is also recommended to search

for strains high in the terpene Myrcene as it is loaded with anti-bacterial and anti-fungal properties.

Products that can be consumed through oral products such as probiotics that also contain CBD work really well for digestive distress.

Recommended method of intake: Mukwa wellbeing and Balance tinctures, oils, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars,



Treat Leaf edibles, Baked Edibles capsules;, London Donovan CBD 300mg/900mg tinctures.

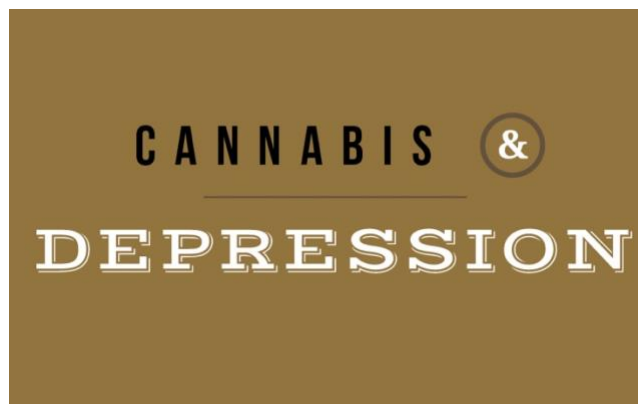
Depression

Symptoms: Depressive disorders are common and very serious, complex illnesses. Depression is estimated to affect one in fifteen adults in any given year. Depression negatively affects how people think and act. Those with depression can experience – feelings of sadness, worthlessness, or guilt; loss of interest in activities; changes in appetite; trouble sleeping; suicidal thoughts; difficulty thinking, concentrating or making decisions.

Benefits: Of people suffering from depression, 80% were also found to be suffering from pain. With the ability to stimulate the endocannabinoid system, cannabis is used to treat a variety of ailments, both physiological and psychological. Cannabis stimulates the endocannabinoid system similarly to anti-depressants, but in a much quicker manner. The analgesic properties of THC provide relief from pain and inflammation caused by illnesses which allows for a higher quality of life.

Cannabis is a natural remedy for depression which combats stress, enhances mood and energy, increases appetite, and battles insomnia.

Those suffering with depression not associated with pain will find CBD strains and products to be the most beneficial. CBD acts on the serotonin receptors located in the brain which are



associated with mood balance. It also has relaxing and soothing effects which will help decrease stress and in turn boost mood.

Treatment: It is important to consider how different everyone's physiology is and that experimentation will determine the optimal cannabinoid percentage that works best. When treating depression with cannabis we recommend starting with CBD. It can be administered through drops, edibles, or inhalation. Due to the complexity of depression, treatment should start off small for inexperienced users due to the possibility of worsening symptoms; more can always be administered. CBD has fast-acting antidepressant properties making it much greater natural remedy option.

Due to uplifting and energizing properties of sativa strains, further treatment with sativa strains with very low amounts of THC in conjunction with CBD's calming effects can give energy when struggling with fatigue due to depression. Cannatonic and Nero are great strains for depression due to their high CBD to THC ratios. Too much THC can cause paranoia and anxiety. Strains and oils that contain the terpenes limonene, myrcene and linalool, work in an entourage effect with CBD to provide even more calming and mood-improving effects.

Recommended method of intake: Mukwa Wellbeing and Daytime Pain tinctures, London Donovan CBD 300mg/900mg tinctures, smoking, vaporizing, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules;

Epilepsy

Symptoms: Epilepsy is a neurological disorder categorized by unpredictable seizures of a wide range of types and levels of control varying between people. Along with seizures, individuals may experience other symptoms such as – convulsions, confusion and memory loss, fainting or blackouts, loss of bowel/ bladder control, body stiffness and unresponsiveness, fearfulness or anger, sudden bouts of chewing or blinking.



Benefits: Cannabidiol (CBD) is effective in reducing frequency and severity of those who suffer with epilepsy. High levels of CBD have shown to dramatically reduce seizures and some people have shown to become seizure-free. Patients who have a hard time with treatment-resistant epilepsy are encouraged to try CBD since many patients

have found CBD to be very effective. When choosing to treat epilepsy with medicinal cannabis, choosing the right strain that contains pure CBD like the Charlotte’s Web cannabis flower, or Candida and Grape Goddess. These strains not only contain CBD but also have the terpenes linalool, a terpene that has anticonvulsant effects.

Treatment: CBD is the non-psychoactive ingredient that makes up the cannabis plant but its uses extend towards aiding in the treatment of and control of seizures as well as neuromotor disorders. It is imperative to avoid strains that contain THC due to side effects occurring such as anxiety and impairment. CBD can be administered through tinctures, oils, edibles, vaporizing, and smoking. The immediate effects of inhaling the cannabis flower can allow for intake of the medicinal cannabis as needed for instantaneous relief.

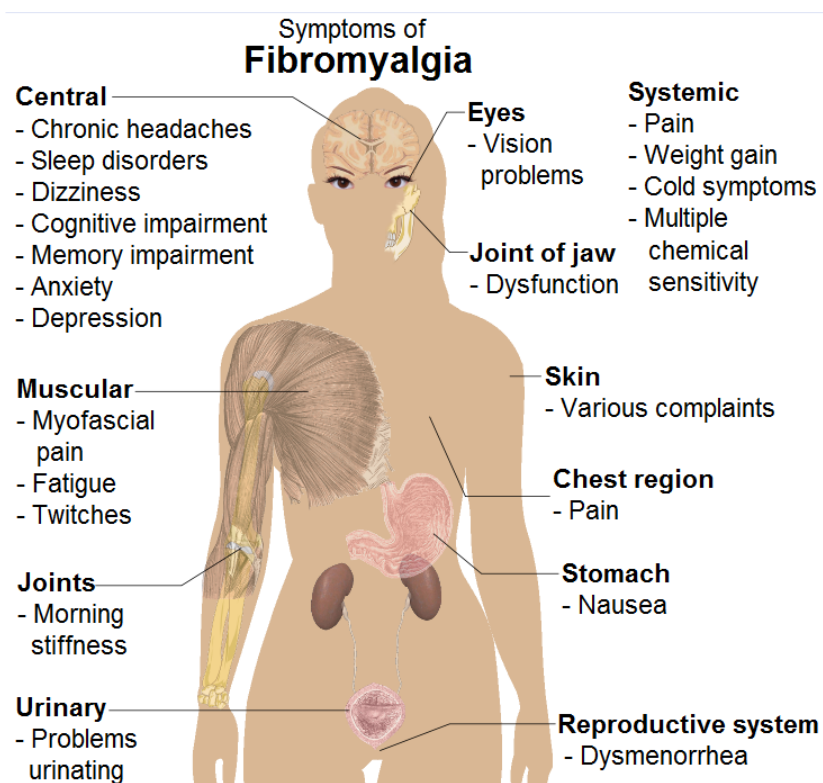
Recommended method of intake: Mukwa Wellbeing tincture, CBD vaporizers, CBD oil, CBD edibles, London Donovan CBD 300mg/900mg tinctures, London Donovan AM/PM disposable vaporizer, Baked Edibles Phoenix Tears CBD 100mg.

Fibromyalgia

Symptoms: Fibromyalgia is a disorder that causes muscle pain and fatigue. It is often found to coincide with other conditions that cause chronic pain. Symptoms include – numbness or tingling in hands and feet, drowsiness/fatigue, widespread pain, moodiness, headaches, cognitive and memory difficulties.

Benefits: Cannabis containing both THC and CBD are known to be the best pain relievers. When administered together, they work in an entourage effect to relieve pain and reduce inflammation.

Fibromyalgia is a condition that exudes symptoms that are ever-changing where cannabis can allow for treatment to be altered. Method intake as well as amount can be altered daily depending on symptom manifestation and severity. Unlike prescription medications, cannabis has no dangerous side effects, therefore strains that contain both CBD and THC are known to relieve widespread pain and headaches.



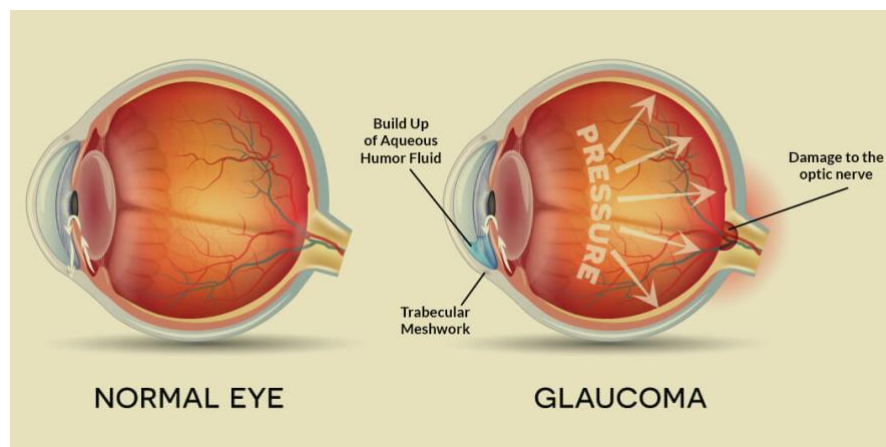
Treatment: Microdosing throughout the day helps relieve pain intensity and keeps pain under control. Using strains higher in CBD or CBD oils with trace amounts of THC minimizes psychoactive effects while still providing relief from tingling and pain. For evening use, or stronger relief of pain, it is recommended to use products that have a higher THC content.

To achieve a restful sleep, a combination of Indica edibles as well as vaporizing will allow for a good night's sleep, which then helps with easing and controlling symptoms throughout the following day. Strains that are high in the terpene linalool have a strong relaxing body effect and are well suited to preventing the various bodily sensations and pains that are affiliated with fibromyalgia. Studies have shown that daily dosing of CBD can help reduce the overall array of symptoms that are caused by fibromyalgia.

Recommended method of intake: Smoking; strains like Fire OG contain the terpene linalool, vaping, Mukwa Daytime Pain, Mukwa Nighttime Pain, Mukway Balance tinctures, edibles, London Donovan CBD tinctures 300mg/900mg, London Donovan AM/PM disposable vaporizer.

Glaucoma

Symptoms: Glaucoma is a condition of the eye that is associated with increased pressure within the eye that can lead to damage of optic nerve. Increasing evidence illuminates that glaucoma is connected to neurodegenerative disease. This can lead to loss of vision, appearance of rainbow colors,



circles around bright lights, eye pain, headaches, nausea and vomiting.

Benefits: Various studies illuminated the fact that cannabis consumption can lead to a decrease in pressure within the eye that can cause damage to the optic nerve.

Due to the contents of THC, the cannabis plant has anti-inflammatory properties which can lead to the slowing down process of vision loss caused by a decrease in intra-ocular pressure (IOP). Smoking or direct eye drops can help alleviate pain and nausea that is caused by headaches from pressure within the eye. In order for cannabis to show effectiveness in reducing intra-ocular pressure, for example, it's important to take time to assess the dose and effects that accompany the intake of cannabis.

Treatment: Although THC infused topical eye drops are less abundant on the market, direct contact to the eye is most effective at an average content of 2.8% THC. This shows to decrease the intra-ocular pressure most immediately. Secondary but also effective is smoking and vaporizing which are fast-acting but short-term, which means administration should be up to 4 times per day to ensure intra-ocular pressures stays at bay.

Recommended method of intake: Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules;, smoking or vaping, low THC eye drops, London Donovan THC 300mg/900mg tinctures

Insomnia

Symptoms: At least 30% of people suffer from insomnia and about 10% suffer from chronic insomnia. People who have insomnia have different times of sleeping and have also difficulty falling and staying asleep.

Those who suffer from insomnia also experience daytime tiredness and feelings of restlessness, irritability, depression, anxiety and have difficulty paying attention and staying focused.

Benefits: Cannabis is ideal for treating insomnia as it is an analgesic and has antianxiety properties where it can soothe pains and stress that is can lead to trouble sleeping.

Strains that contain THC are most effective at fighting insomnia due to its ability at reducing REM sleep.

Having shorter REM cycles can allow for our bodies to reach a deeper sleep cycle for longer amounts of time. Studies have shown that cannabis intake before sleep can also improve a breathing condition known as sleep apnea, where individuals wake up throughout the night due to breathing repeatedly stopping and starting.



Although THC is commonly used to fight insomnia, CBD also has antianxiety properties that can be used to reduce stress and decrease sleeplessness. Strains that contain the terpene myrcene are also effective in relaxing the body and allowing for a goodnight's sleep.

Treatment: Indica strains have the power to be sedative and are ideal for sleeping disorders. Strains with a 20% THC content or less can allow for a full night's sleep without causing side effects of grogginess the next day. It is important to start with low doses of THC until you can find the right dose for you. Smoking or vaping can provide instant effect and can be done right before going to sleep.

Tinctures and edibles may not have sudden effect, but they will have more of an effect on the body and work well for falling and staying asleep. When consuming edibles it is ideal to start off with a low dose until you know which dose amount is right for you.

Recommended method of intake: Mukwa Sleep and Nighttime Pain tinctures, Qandy THC/CBD edibles, smoking or vaping predominantly Indica strains like Black D. O. G. , DoSiDos, Strawberry Cheesecake.

Menopause

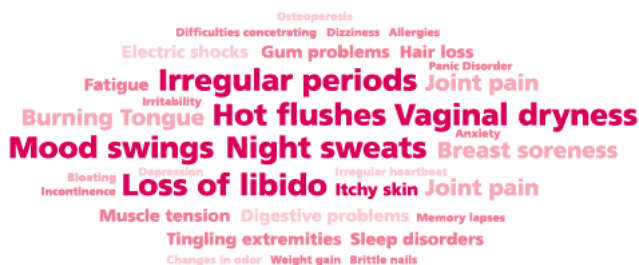
Symptoms: Menopause is a time in a woman’s life where there is a drastic change in hormonal activity where cessation of egg production typically occurs between the ages of 45 and 55 and can last from 7 to 14 years. During this time the ovaries do not release eggs and stop estrogen production, marking the end of menstrual cycles.

During these changes, woman can experience insomnia, mood swings, hot flashes, fatigue, depression, irritability, headaches, body pain, change in libido, racing heart, and bladder problems.

Due to the loss of estrogen, more serious problems can arise with age such as osteoporosis, risk of Alzheimer’s, poor muscle power, heart disease.

Benefits: No woman can avoid menopause which is why adding cannabis to your life can making it easier to manage in a more natural way. In our body, the

Endocannabinoid System is responsible for maintaining what is known as homeostasis and alongside cannabinoids THC and CBD, can



contribute to balancing women's bodily systems. Although studies are still under development, it is said that early onset of menopause is due to the endocannabinoid system being in a deficient state. Estrogen and the endocannabinoid system work together so when levels of hormones drop, so do our natural endocannabinoid levels, leading to an emotional and mood imbalance.

THC is known for being great at relieving pain and aiding in inducing sleep. Unlike opioids or other pain medications, there is no risk of overdose or addiction. Studies have also shown how cannabis can reduce levels of depression and anxiety and help regulated mood swings.

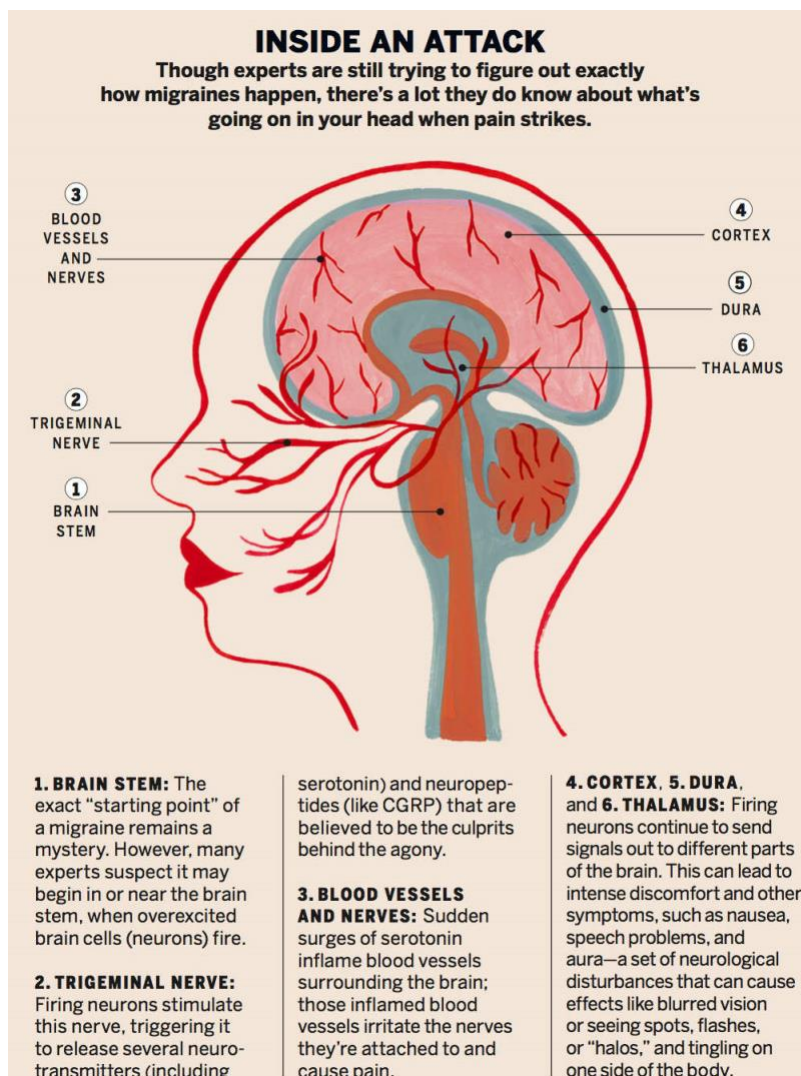
Treatment: The most effective way to treat menopausal symptoms with cannabis is to microdose throughout the day to maintain a clear mind. A combination of CBD and THC can be administered orally via tinctures or edibles/edibles oils, where this will help with mood regulation as well as mediate any associated pain such as breast tenderness, headaches, or cramping. Vaping or smoking are more immediate methods of intake and relief, although the effects don't last as long as via ingestion. Higher THC strains or products will help with insomnia; a combination of vaping or smoking with oral drops of edibles can help a person fall asleep and stay asleep. Be advised to use the THC products with caution as they can exacerbate feelings of anxiety.

Recommended method of intake: Mukwa Daytime Pain and Mukwa Balance tinctures, London Donovan CBD and THC 300mg/900mg tinctures, Baked Edibles THC/CBD capsules

Migraines

Symptoms: Migraines are throbbing headaches, localized to one side of the head. Migraines are generally triggered by allergies, light or stress and are typically recurring and can last hours or even days.

With migraines one can experience light, sound, and touch sensitivity; visual disturbances, pulsing or throbbing pain in the head, nausea and vomiting, lightheadedness.



Benefits: Cannabis is widely used to treat nausea, vomiting, pain. It is used to ease symptoms of migraines and if timed properly, can even keep migraines from starting.

Treatment: Inhaling cannabis is the most effective treatment, through vaporizing a pen or smoking the cannabis flower. The best way to alleviate symptoms of migraines would be through inhalation

due to its fast-acting effects and easy way to gauge dosage. A combination of products could be used to ensure a fulfilled treatment; using a vaporizer can provide almost immediate relief then

edibles/tinctures could prolong the relief and help with sleep. Strains that contain the terpene myrcene can in fact enhance the effects of THC and can provide more pain relief than the strains without myrcene.

In terms of stress- induced migraines, CBD is used to treat a wide variety of ailments such as stress, anxiety, and depression, leading to a decrease in migraine frequency. Taking CBD daily and adding a dose of THC when a migraine arises is also a good option. For pain that is localized, applying a topical THC salve could reduce the localized pain, if superficial enough.

Recommended method of intake: Smoked or vaporized cannabis flower, CBD oil, Mukwa Nighttime Pain tincture, Mukwa Releaf Stick, Fleurs Doze Tea Fleurs CBD Roll-on.

Muscle and Joint Pain

Symptoms: Muscle, joint and general pain are physical symptoms associated with injuries among other ailments like arthritis, fibromyalgia, infections, stress or side effects from medications.

Individuals with muscle, joint or general pain may also feel localized pain or develop swelling in joints or muscles, bruising, locked joints or stiffness; and in the morning feelings of tingling or numbing in extremities, generalized pain, and body aches can persist.

Benefits: Cannabis is not only free of addictive properties and risk of overdose, it is an effective method of pain management, and is safer than traditionally prescribed medications. The anti-inflammatory and analgesic properties of cannabis can provide relief for those that suffer from joint, muscle and general pain. Cannabis works hand in hand with our endocannabinoid system to activate receptor pathways which fight against symptoms like pain and inflammation. Whether the pain is caused by an injury or disease, cannabis ensures to reduce

inflammation and can speed up the process of healing at the microscopic level. Cannabis can significantly improve the quality of life for those who suffer with chronic pain.

Treatment: CBD and THC work with each other synergistically to provide the best treatment for joint, muscle, and general pain. Strains higher in CBD will be more beneficial in treating pain caused by spasticity or cramping, as well as neurological pain. Smoking or vaping can offer a quick relief from pain, taking effects within minutes. It is always important to consider starting small and work your way to a stronger dose. The goal should be to relieve symptoms without unwanted psychoactive effects. Topical treatments are also a great



method to relieve localized pain; tinctures, oils, and edibles can be good to target pain also, but can longer to take effect. The combination of inhaling and supplementing with tinctures/oils can provide a long-lasting effect of pain

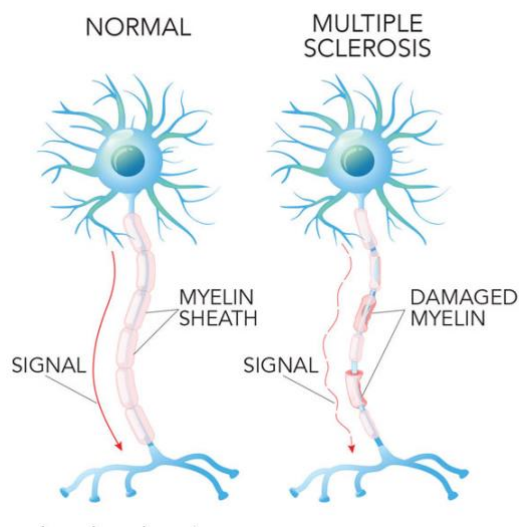
relief throughout the day.

Recommended method of intake: Mukwa Relief Stick, Mukwa Daytime and Nighttime pain tinctures, smoking, vaporizing, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules; Fleurs CBD roll-on.

Multiple Sclerosis (MS)

Symptoms: Multiple Sclerosis is a disease in which the body's own immune system attacks the myelin sheath that wraps around the nerve fibers. This demyelination process affects how the nerves work and inhibit the fibers from sending signals correctly throughout the body. This can lead to muscle spasms and stiffness; fatigue, unusual sensations, pain, tremors, difficulty concentrating, bladder/digestive problems.

Benefits: Cannabis has positive effects on muscle spasticity, stiffness and pain. Cannabis strains that contain amounts of CBD higher than or equal to THC are known to have the most benefits to those suffering with multiple sclerosis. Spasms decrease, muscles relax, and people begin to have more control over their bodies. Due to the anti-inflammatory properties of THC and CBD, inflammation within the brain has shown to decrease in patients over time. THC has the ability to stimulate appetite which causes the body to release digestive enzymes, therefore increasing the body's metabolism and contributing in any gastrointestinal issues that people with MS may be experiencing.



Treatment: To improve the quality of life for someone who lives with multiple sclerosis, Indica strain and cannabis plants that are high in the terpene myrcene have more of a body relaxation effect. These strains in particular will target symptoms like muscle spasms, stiffness, and any unusual sensations. To help with nighttime problems such as insomnia or nightly pain, consuming an edible an hour before going to bed can have a strong

effect on the body and can prolong a restful sleep. Throughout the day, CBD oils, extracts/concentrates, and cannabis flower can be consumed to help with any pain, muscle stiffness and spasms. To help maintain mental clarity and manage pain altogether for daytime, choose products with lower THC and higher amounts of CBD.

Recommended method of intake: Smyle oral sprays, smoking, vaporizing, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules; London Donovan AM/PM disposable vaporizer, Fleurs CBD assorted teas.

Parkinson's Disease

Symptoms: Parkinson's disease is a progressive neurodegenerative disorder that affects the motor system of the central nervous system. When nerve cells in the brain degenerate, they can no longer send sufficient amounts of dopamine throughout the brain which can lead to motor control issues ranging from dyskinesia – uncontrolled movements, bradykinesia – frozen movements or inability to consciously move. Other symptoms of nerve cell degeneration include, tremors in the arms, hands or legs; stiff muscles; slow movement; problems with balance and walking, dementia and confusion; depression and general cognitive decline.

Benefits: Cannabis shows to have neuroprotective and antioxidant properties. Parkinson's disease is thought to create a buildup of neurotoxins that the body cannot eliminate, and cannabis can aid in removing any unwanted toxins. Cannabis studies have shown that THC inhibits the death of brain cells in neurodegenerative disorders, and alongside CBD's neuroprotective factors and ability to contribute to neurological regeneration, cannabis has the potential to be an effective treatment for Parkinson's Disease.

Treatment with cannabis provides relief from pain and tremors, and can improve mobility, sleep and mood. The cannabinoids found within the cannabis plant can activate the receptors within our own endocannabinoid system, releasing analgesic, muscle-relaxing, and other therapeutic properties.

Treatment: The most effective treatment for Parkinson's Disease includes both CBD and THC contents of the cannabis plant among other cannabinoids that are necessary to work towards maintaining the entourage effect.

Treating Parkinson's with cannabis will depend on the how severe symptoms are to individuals as well as their preferences.

Mild symptoms can be managed by smoking, vaping, tinctures, or evening teas and edibles that have a moderate dose of CBD and a lower dose of THC. Pure CBD products can ensure that there are no psychoactive effects but both THC and CBD can be used in combination. As the severity of symptoms progress, individuals may find that strains/products containing higher THC

percentage have more of an effect on keeping symptoms at bay. Due to its complexity, people suffering from Parkinson's disease will have to try different ratios of CBD to THC and different dosage schedules to find

Parkinson's Disease Symptoms



what works for them. Suggested dosing would look like a 1:1 or 2:1 CBD:THC at a low to moderate dose, then adjust from there.

Recommended method of intake: London Donovan THC/CBD 300mg/900mg tinctures, smoking, vaporizing, Fleurs assorted CBD teas, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules;, London Donovan AM/PM disposable vaporizers.

PMS and Menstrual Cramping

Symptoms: PMS or pre-menstrual syndrome is a combination of physical and emotional symptoms that occur in a woman's body one to two weeks prior to her period. Over 90% of women suffer from some form of PMS, whether it is mild or severe. These symptoms are caused by hormonal changes within the body and can cause breast tenderness, bloating, cramping, headaches, mood swings, and gastrointestinal discomfort.



Benefits: Cannabis is known for its analgesic properties as well as mood-enhancing abilities. The benefit of using cannabis as a treatment method is that it offers a wide range of options for pain relief as well as mood management without the addictive properties and side effects of some other pain relieving and mood-elevating medications.

Depending on symptoms, treatment can be fulfilled with THC, CBD or both. For pain management, products or strains that contain higher levels of THC are most effective for more severe cramps, headaches,

and breast tenderness. THC is also a muscle relaxant which can provide relief from gastrointestinal symptoms, cramping and muscle tightness. CBD is perfect for treatment of mood and emotional imbalances and can reduce levels of stress and anxiety that can occur during menstruation. This can help reduce symptoms of severe emotional symptoms; where women who are inexperienced with cannabis should avoid the use of THC as it may worsen anxiety or cause paranoia.

Treatment: The days leading up to a cycle can be an emotional roller-coaster and treatment of PMS will vary depending on the intensity and type of symptoms one may experience. A combination of THC and CBD can provide relief from both pain and cramping, as well as emotional symptoms.

If symptoms are mild and localized, like cramping, a topical can be applied directly to the affected area. Products include salves, creams and transdermal patches. For more intense symptoms, edibles will have a more intense bodily effect and can alleviate pain for cramps, back aches, headaches and other pains.

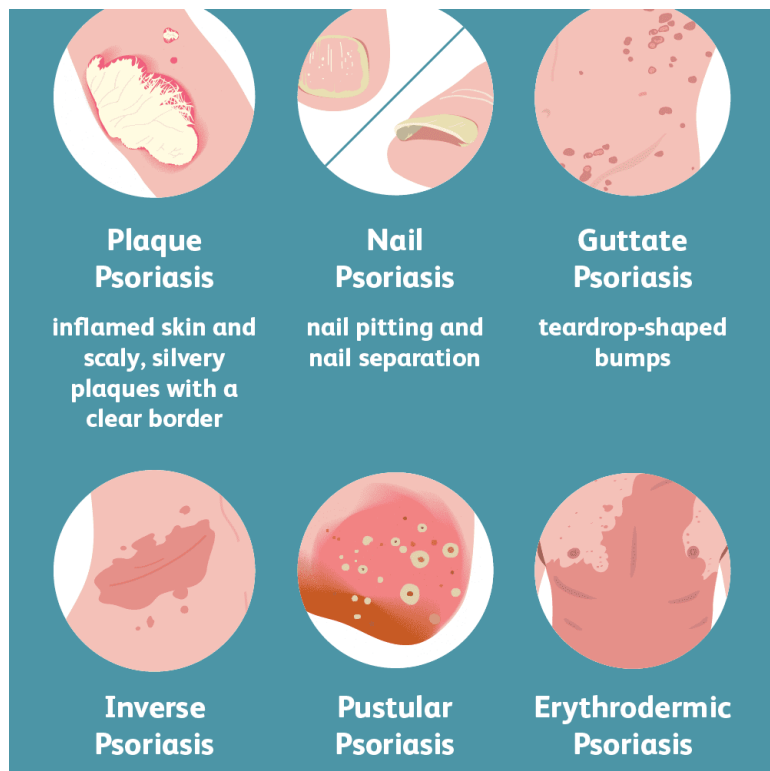
Smoking or using vaporizers eases the pain and discomfort much faster and can be ideal for acute or sudden-onset symptoms. However, the effects from inhalation are not as long lasting as those from oils, tinctures, or other edibles. Cannabis strains that are used for PMS and high in CBD include Pennywise, Super Lemon Haze, Pinks, and White Widow.

Recommended method of intake: Mukwa Releaf and Healing Sticks, Mukwa Wellbeing and Balance tinctures, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules; Fleurs assorted CBD teas, smoking and vaping.

Psoriasis

Symptoms: Psoriasis is a difficult skin condition that manifests itself as itchy, scaly, red patches of skin. It is characterized as an autoimmune condition where skin cells replicate too quickly and immature skin cells appear on the surface of the skin, most often on the knees, elbows and other joints along the body, that lead to discoloration and flakiness. Studies have shown that there is a link between the appearance of psoriasis to depression and anxiety.

Benefits: Unfortunately, psoriasis is not curable but fortunately cannabis can ease symptoms associated with this ailment and increase quality of life. More specifically, cannabis works directly with our endocannabinoid system and can be used for its anti-inflammatory and anti-itch properties as well as relieving moderate pain and discomfort. THC is used as an analgesic and in conjunction with CBD, it can help control anxiety and depression as well as decreasing inflammation and help to control immune response. Laboratory studies have shown that a



variety of cannabinoids can slow improper cell growth in keratinocytes, which helps to slow the progression of psoriasis.

Treatment: Topical application of cannabis through creams and salves contain THC and can provide localized

relief from itching and pain. A combination of THC and CBD topical products can help heal any wounds in the area and potentially slow down the uncontrolled replication of skin cells. Ingesting cannabis medicines and its cannabinoids can eventually lead to slowing down the growth of new cells where their immune affecting properties along with CB2 receptors in the skin. Creams containing THC-A may help to moisturize skin to reduce symptoms of psoriasis. Topical treatment with THC, THC-A, and CBD combined with microdosing of both THC and CBD can help alleviate many of the unpleasant symptoms of psoriasis.

Recommended method of intake: Topical creams and salves like the Miss Envy Buddha Bar, Mukwa Wellbeing and Daytime Pain tinctures, Mukwa Healing Stick, microdosing via smoking or vaporizing.

Restless Leg Syndrome

Symptoms: Restless leg syndrome (RLS) is a sensorimotor disorder of the nervous system that causes an irresistible urge to move the legs. People experience various sensations most often when they are at rest or just before falling asleep. Symptoms of RLS include – various sensations in the legs, itchiness, pins and needles, creepy crawly feelings, sleep disturbances, restlessness and inability to fall asleep.

Benefits: Studies have found that inhalation of cannabis medicines works best to provide relief from RLS within minutes, but this method can wear off within a few hours but the best time to consume is shortly right before bed. The quick effects of inhalation decrease the irritating sensations in the legs, where strains that have higher levels of THC can help promote sleep and improve overall sleep quality.

Treatment: Due to the nature of Restless Leg Syndrome, the most effective approach is to smoke or vape right before bed due to its immediate relief. Doubling-up through consumption of edibles, tincture drops, or cannabis oil can help those who suffer remain asleep. Indica

strain as well as cannabis flowers that contain the terpene linalool and myrcene work best due to their relaxing properties. A combination of smoking – for the quick effect, and an edible – can allow for a full and deep night sleep.

Recommended method of intake: Mukwa Sleep and Nighttime Pain tinctures, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules; smoking or vaporizing indica or indica-dominant strains such as Purpke Kush, Presidential OG, or Romulan.

Sciatica

Symptoms: Sciatica is the term for pain and unpleasant nerve sensation brought about by pressure or injury created at the sciatic nerve which runs from the lower back down to the back of the leg.

Symptoms of sciatica include – lower back pain, pain in the buttocks or leg, hip pain, burning or tingling down the leg, weakness or numbness which causes difficulty in moving the leg, constant pain on one side of the buttocks, and shooting pain that make it difficult to stand.

Benefits: Cannabis is being widely used for its analgesic properties. Studies have shown to be an effective, natural pain reliever to pain that is associated with sciatica. This will allow for people who struggle with sciatica to continue with their daily routines as well as allowing for them to work on treating the cause of sciatic nerve impingement.

Treatment: Studies of cannabis to treat sciatic nerve pain have found that inhalation is most effective when consumed several times per day. The pain will remain constant as long as there is pressure on the sciatic nerve, so regular dosing throughout the day is important to keep pain at bay. THC is the most effective pain-relieving cannabinoid, but CBD can also help reduce inflammation around the nerve which may

contribute to pinching of the nerve. Patients found there was an overall decrease in pain caused by the sciatic nerve as well as improvements in physical and mental function when treating sciatica with cannabis. Edibles and tinctures can also provide pain relief, but these are slower acting and may not provide relief quickly enough for some people. Immediate relief of symptoms can be achieved through inhalation and also ingesting cannabis oil or tincture drops to provide long-lasting relief.

Recommended method of intake: Smoking, vaporizing with House of Glass Shatter, Mukwa Daytime and Nighttime pain tinctures, London Donovan CBD/THC 300mg/900mg tinctures, Euphoria Extracts Shatter Indica/Sativa Chocolate Bars, Treat Leaf edibles, Baked Edibles capsules.