



LEARNING ABOUT **CANNABIS** AND CBD OIL

SEPTEMBER 2018

SO, YOU THINK IT'S LEGAL

© TERRY MERCER, 2018

TABLE OF CONTENT

Preface	4
About CBD OIL	6
What is CBD Oil?	7
Are Hemp and Marijuana the Same?	12
What they CLAIM CBD Oil DOES:	14
Epilepsy -	14
Cancer -	14
Chronic Pain -	14
Magic Cure All -	14
Is it legal?	18
BIGGEST CONCERN:	20
Is it safe?	25
1980 Study in Pharmacology	25
1986, International Journal of Neuroscience	25
In 2011, an article published on Medicinalgenomics	26
SERIOUS WARNING: Early 2018	27
Differences in Manufacturing Processes	30
Claims of 100% Pure or ZERO THC:	31
Colors of CBD Oil is Telling:	34
Raw -	34
Decarboxylated -	34
Filtered -	34
Cut -	34
Senses FACTORS –	35

Feel –	35
Smell –	35
Taste –	35
Potency Variances	36
Why MD's Choice does NOT sell it:	37
How It started (some boringly interesting history):	38
Chinese have records dating back to 8,000BC	38
Medical use was found first in written records in 2,737 BC	38
1906 President Theodore Roosevelt enacted the	
“Pure Food and Drug Act' (start of the FDA)	39
The 1936 film 'Reefer Madness'	40
Who Profits (off the 'War on Drugs'):	46
a) Illegal Drug Suppliers/Manufacturers –	46
b) Herbal Supplements (promoting synthetic highs) –	46
c) Drug TESTING industry –	46
d) Alcohol Industry –	48
e) Private PRISON industry –	48
f) Addiction Recovery Industry -	49
g) Judicial System -	49
A pediatric study involving CBD Oil at Children's of Alabama,	
was officially authorized by the Alabama Legislature in 2014	51
August 1, 2018, the first Canadian pediatric study of mixed	
THC/CBD cannabis oil for children	52
Conclusion	53
ACKNOWLEDGEMENTS	54
REFERENCES	56

LEARNING ABOUT
CANNABIS
AND CBD OIL

© TERRY MERCER, 2018

PREFACE

It is important to me, to make sure you – the reader – understands that I'm NOT SELLING YOU ANYTHING in this article. We do not have, sell, represent, or promote any CBD Oil product, CBD manufacturer, THC supplier, or Cannabis Industry Person.

The research we've done has all been reading, asking questions, speaking with people claiming to be experts, and gathering more information... then trying to evaluate it honestly, ethically, and rationally. We bothered gathering it because WE HAVE family, friends, and clients, that suffer from the results of debilitating and unpredictable



seizures since their birth. Friends with Parkinson's, and Cancer. We have lost loved ones to Cancer. Some battle still today). So we took this project seriously, and tend to pay closer attention when rumors circulate in the scientific community about any nutrient, supplement, or any drugs that *might* help them. The information and

studies below became a particularly interest to us, for the above personal reasons.

Understand, each person and case is different. Their diet, exercise routine, genetics, other medications & treatments, medical history, environment, must be considered. What works for one might not work well, or the same, for another person. Biology and physiology have some absolute similarities. The vast majority of people's bodies function in the same way, and respond to vitamins, minerals, trace minerals, amino acids, enzymes, and certain nutrients in very similar fashions. However, people respond to drugs with far more variables, whether pharmaceutical or natural, there are often more differences and side effects.

It was suggested that we share some of what we've learned over the years, so it might give other's something to think about... maybe learn something, and have something more to discuss with their doctor, or professional healthcare provider, as necessary.

NOTHING HEREIN has been approved by the FDA, or any other government agency. The information contained in this document, or any website, is not intended to prevent, treat, or cure any ailment or disease.

Use the information at your own risk, and PLEASE consult a specialist in the field you (or your loved one) has a problem with, don't blindly believe those selling bottles of CBD Oil at the swap meets, Flea Markets, or on-line. Look at the SCIENCE, its significance to your specific needs. Specialists spend 12 to 16 years getting their degree in that specialty, and their opinion... their ability to SEE the patient, to RUN the tests, to evaluate



the individual situation... gives them an incredible advantage. If you don't like or trust them, get a second opinion... from another professional, not Dr. Google, or some stranger on line. You should consult YOUR DOCTOR before using any cannabis product(s), and honestly consider the potential legal ramifications. Really could be a double edge sword.

The CBD Oil Industry was less than \$10 million just a five years ago, over \$190 million in 2017, and the estimates push \$20 Billion (yep, with a B) by 2020... and over \$200 Billion a year WHEN it becomes legal federally! With the medical break throughs, it doesn't appear to be an 'if' (it becomes legal), but WHEN.

ABOUT CBD OIL

It's universally accepted that history, and science, proves Cannabis has really been used for medicinal purposes for thousands of years.

However, because it was growing in popularity for recreational use, and starting to directly compete with the same 'customers' the alcohol industry was targeting, the world's best marketing campaign started. It was easy for those lobbying against 'pot' (marijuana, weed, THC, etc.), because it was tough to monitor, tax, and control... because anyone could technically grow it... far easier than making your own alcohol.



The government found it was easier to 'outlaw' cannabis than to establish and enforce existing rules & laws. Easier to ban, than have regulations for reselling and

commercial growing operations. Since it could be grown in the wild, or virtually anywhere, there was also no way to guarantee it could be kept out of the hands of children (without proper supervision). Since it's become partially legalized to treat children with interactive epilepsy... yes, some children use it for medical reasons. Just like the prohibition against alcohol at the turn of the century, cannabis has been demonized, propagandized, condemned, and outright lied about.

However, the reality is, today ALL cannabis, and related products, are still listed as a 'Schedule 1 Agent' (aka Narcotic: 'a drug with a high potential for abuse, and no currently accepted medical use') by the American Federal Government, and a few other governments around the world. Sadly, that label is disingenuous, especially when you consider the fact there really is a few hundred years of science, decades of actual 'peer reviewed' studies, and the FDA has officially approved a few forms, processes, and uses for medical purposes (for 'Big Pharma'). It's all about CONTROL and MONEY. Just imagine....

ABOUT CBD OIL

First, CBD stands for 'cannabidiol.' Pronounced can-naa-bid-all, a naturally occurring non-psychoactive chemical found in cannabis. It is just one of over 100 cannabinoids, or chemical compounds, that exist in the cannabis plant.

Today, because of the videos that received hundreds of millions of views worldwide, of the children with drug resistant epilepsy so dramatically responding (positively), the discussions about medical use & legalization of marijuana were reignited; and more actual scientific studies call for.

Michael Phelps, the human fish, the man with more Gold Medals than any other person alive, and holder of multiple world records helped bring to light that weed is not just for 'stoners.' Athletes – both Olympians and Professionals, many celebrities – actors, actresses, and musicians, the parents of severely ill children, and people battling cancer, epilepsy, chronic pain, eating, sleep disorders, and assorted other issues have been speaking out publicly about their personal experience with cannabis.



CBD is the second most popular component of the cannabis plant that is regularly discussed, right behind THC. And these two components are probably two of the most commonly discussed herbs in the last decade.

CBD can effectively be manufactured from either marijuana or hemp, both of which are cannabis. That last fact is a large part of the problem, and why it's not been readily legalized at the federal level, in all states, or most other countries. In general, the high quality, low THC products containing less than .03% THC are manufactured from the seeds and stalks of industrial hemp (not the leaves or flowers). If they truly have less than .03% THC, then they are supposedly legal in all 50 states now... under federal law. However, that hasn't stopped some police from confiscating product, and hassling people, until test results came back.

ABOUT CBD OIL

CBD Oil is currently being pushed and hyped, especially here in America, in everything from epilepsy treatments, to pet-calming drops, to muscle rubs, claims of cancer cures, pain relievers, and virtually everything else... in nearly every conceivable form, regardless of safety or actual science.

Understanding that there are primarily two types of 'chronic pain' is important:

- **NEUROGENIC PAIN** – which results from damage to the nerves
- **PSYCHOGENIC PAIN** – which is NOT due to a genetic malformation, past injury, disease, or visible sign of damage.

CBD Oil *might* help quell either of these, since it *might* have some action on the brain and nerves. However, it's important to note that it does NOT help or treat the REASON WHY the pain exists, or help fix any structural or systemic problem. That's what pure nutritional supplements like Arthrosamine (for the joints), GI Support (for the digestive tract) can help with. More info on those can be found at MDsChoice.com if those issues are ever a concern.

Some of the science surrounding CBD Oil and THC are seriously awesome, proving some elements. However, much of the advertising and marketing is claiming a mountain of capability based on a mole hill of actual facts, and some of the claimed 'facts' are a complete illusion told with the zeal of the old snake oil salesman, selling a foul tasting herbal miracle cure, or remedy-everything, that only temporarily masked the symptoms (usually dulled the senses, calmed the nerves, or blocked the pain for a time). Often just long enough for them to get out of town. They never really solved anything, except getting the money of unsuspecting people blind with hope, and often on the back of suffering.

These days, you find CBD Oils in products you can smoke, spray, eat, rub, drink, or even use sublingually (drops under the tongue). The problem is they aren't likely the same. And they really don't all 'work' the same. Even from batch to batch from the same manufacturer, unless things are exactly the same... the potency, capability, and strength could easily be different from batch to batch.

These differences are magnified between manufacturers, using different:

- Sources for raw materials,
- Processing types/methods,

ABOUT CBD OIL

- Production methods,
- Bottling and packaging controls & methods, and
- Shipping/delivery methods – which impact shelf life and quality

CBD Oil has tested out from 0.0000001% (great, but ugly expensive)... to 0.03% THC (which is good, expensive, but likely untraceable in blood tests)... to as much as 3 to 5% THC (which could easily be a problem). Read on, we'll explain why....

According to CNN, on September 7th, 2019, the CNN Wire reported use of actual marijuana is exploding, referencing a study reported in the Journal of Drug and Alcohol Dependence – older adults (those over 50) have experienced a seven hundred (700) percent increase in marijuana use over the preceding decade. At that time, they estimated about 9% of the adults between 50 – 64 years old had used marijuana at least once within the previous year, while about 3% older than 65 had used during that same period. The survey examined 17,608 adults 50 and older. A Dr. Benjamin Han was the lead author of the study, and assistant professor at the New York University School of Medicine. His study also showed nearly 5% of that 'middle age' group also had 'alcohol problems; 9% nicotine dependent, and 3.5% misused opioids. The abuse numbers were 1.5% alcohol, 3.5% nicotine, and 1.2% for misuse of opioids for the over 65 group.



A couple other interesting points, was:

- The 'baby boomers' (those that were teens in the late 50's, throughout the 60's and 70's) were, more than half, (nearly 55%) had used marijuana at some point in their lives. (while only 22% over 65 had done so).
- More than half of those that hadn't used before ASKED IF THEY SHOULD TRY marijuana to help with sleep or pain. (not in that study, but other reports, it's been estimated that over 80% of the people over 50 are either trying CBD Oil or have inquired about trying it... because they are seeing it on facebook, in flea markets, at swap meets, and in the news; and are being told 'it is legal' by people in virtually all 50 states and the District of Columbia).

ABOUT CBD OIL

According to CNN, on September 7th, 2018, the CNN Wire reported use of actual marijuana is exploding, referencing a study reported in the Journal of Drug and Alcohol Dependence – older adults (those over 50) have experienced a seven hundred (700) percent increase in marijuana use over the preceding decade. At that time, they estimated about 9% of the adults between 50 – 64 years old had used marijuana at least once within the previous year, while about 3% older than 65 had used during that same period. The survey examined 17,608 adults 50 and older. A Dr. Benjamin Han was the lead author of the study, and assistant professor at the New York University School of Medicine. His study also showed nearly 5% of that 'middle age' group also had 'alcohol problems; 9% nicotine dependent, and 3.5% misused opioids. The abuse numbers were 1.5% alcohol, 3.5% nicotine, and 1.2% for misuse of opioids for the over 65 group.

A couple other interesting points, was:

- The 'baby boomers' (those that were teens in the late 50's, throughout the 60's and 70's) were, more than half, (nearly 55%) had used marijuana at some point in their lives. (while only 22% over 65 had done so).
- More than half of those that hadn't used before ASKED IF THEY SHOULD TRY marijuana to help with sleep or pain. (not in that study, but other reports, it's been estimated that over 80% of the people over 50 are either trying CBD Oil or have inquired about trying it... because they are seeing it on facebook, in flea markets, at swap meets, and in the news; and are being told 'it is legal' by people in virtually all 50 states and the District of Columbia).

Dr. Han noted that “Marijuana may be therapeutically useful for a variety of symptoms and medical conditions, but the research in this area is extremely limited. Though, for now, it is hard for us to recommend it [marijuana] aside for very specific clinical indications (especially compared to well-studied other options), especially if we do not fully understand its risks for older adults or those with multiple chronic medical conditions.”

Since the 1940's, while scientists were isolating THC, they have isolated about 113 special molecules found in cannabis and identified the existence of over 500 different compounds in the average cannabis plant (most aren't cannabinoids).

ABOUT CBD OIL

The mostly commonly known, and studied are:

THC - Tetrahydrocannabinol

THCA - tetrahydrocannabinolic acid

THCV - tetrahydrocannabivarin

CBC - cannabichromene

CBCA - cannabichromenate

CBCAC5A - Cannabichromenic acid A

CBCC5 - Cannabichromene

CBCVA -

CBCVAC3A - Cannabichromevarinic acid A

CBCVC3 - Cannabichromevarin

CBD - Cannabidiol

CBDA - cannabidolic acid

CBDAC5 - cannabidiolic acid

CBDC1 - Cannabidiolcol

CBDC4 - Cannabidiol-C4

CBDC5 - cannabidiol

CBDMC5 - Cannabidiol momomethyl ether

CBDV - cannabidivarin

CBDVAC3 - cannabidivarinic acid

CBDVC3 - -Cannabidivarin

CBG - cannabigerol

CBGA - cannabigerolic acid

CBGAC3A - Cannabigerolic acid A

CBGA-C5A - Cannabinerolic acid A

CBGAMC5A - Cannabigerolic acid A monomethyl ether

CBGC5 - Cannabigerol

CBGMC5A - Cannabigerolmonomethyl ether

CBGVAC5A - Cannabigerovarinic acid A

CBGVC - Cannabigerovarin

CBL - cannabicyclol

CBLA -

CBN - cannabinol

CBNDC5 - cannabinodiol

CBNDC3 - cannabinodivarin

CBT - cannabicitran

Delta-8-THC

"What most people may not realize is that the human body actually produces its own 'endogenous cannabinoids,' which are natural equivalents to the compounds found in the cannabis plant, such as THC (tetrahydrocannabinol) and CBD (cannabidiol). However, they are NOT THC, tetrahydrocannabinol, is NOT 'natural to' or 'made by' the human body. CBD, cannabinol, on the other hand IS FOUND IN EVERY HUMAN BODY! In the brain and spinal column. So, if you test positive for THC, it's because you smoked, breathed, ingested, or somehow took a product containing THC. There is NONE, zero, found naturally or normally in the human body. Again, there are Endocannabinoids... potentially even trace amounts of CBD... naturally made and found in the body, but they are not the same as THC. Other than the dopamine (a neurotransmitter that helps control the brain's reward and pleasure center. It also helps regulate movement and emotional responses. Dopamine enables us not

ABOUT CBD OIL

only to see rewards, but to take action to move toward those rewards) there is no THC."

When cannabinoid acids are heated (i.e., smoked, or heat processed, or baked) they lose the "A" (acid) part, and turn into neutral (rather than remain acidic).

Most cannabinoids will not cause an intoxicating effect, or 'get you high.' THC is the only known cannabinoid that will for sure do that. However, the presence of the other cannabidoids can absolutely impact HOW THC affects a body, as they influence the way the THC interacts with the receptors in the endocannabinoid system naturally within the body of mammals.

There are three types of cannabinoids:

- Endocannabinoids (found naturally, in the body)
- Phytocannabinoids (found in plants)
- Synthetic cannabinoids (produced in a lab)

CBD, like THC, interacts primarily with the brain neurons, which are specialised cells in your central nervous system (the brain and spinal cord) that transmits and interprets all nerve impulses, which is the pathway and control center for all five senses... plus pain,

thought, emotions. Both voluntary and involuntary actions.

Assistant Professor at the Boston University School of Social Work, Christopher P. Salas-Wright, said the 'number of credible studies already provide compelling evidence that marijuana (and CBD Oil) use has increased meaningful among adults in general, middle-aged and older adults in particular, over the last 10 to 15 years."

It's been projected that cannabis products will be 100% legal for medical use in all 50 states before 2024, and that more states will be pushing to legalize personal recreational use... and the federal government will finally and officially remove marijuana (and all other cannabis products) from the Schedule 1 list. That will be huge; and will absolutely impact the alcohol market, and the big pharma.

ABOUT CBD OIL

The right amount of quality CBD Oil can activate receptors in the brain that THC can't: such as, the adenosine, serotonin, and vanilloid receptor.

When introduced into the body, here's what those specific receptors do:

- CB1 and CB2 - are Class A G protein-coupled receptors (GPCRs), naturally occurring within mammals bodies, they impact (and effect) the dopamine receptors. Science has shown these receptors regulate and directly impact learning, coordination, sleep, pain, and the immune system.
- the adenosine receptor - resultant brain activity reduces anxiety.
- the serotonin receptor - reduces depression, alters blood sugar levels, limits nausea, and a whole host of other neurological and biological effects.
- the vanilloid receptor - limits the 'feeling' of pain and inflammation, masking symptoms.

Studies have proven that cannabidiol does NOT affect short term memory loss;

however, THC does.

“For those in the over 50 crowd, that might have tried marijuana in the 60's or 70's, it's important to understand that the stuff today is NOT THE SAME! In fact, studies, such as those done by Goulle and Guerbet, have shown that the THC level has risen by a factor of 4, from 4% to 16%, over the last 20 years [speculating that there was another rise in potency in the 20 to 30 years prior to that]. Their research showed that, "This increase has important implications not only for the pharmacokinetics but also for the pharmacology of THC. The mean bioavailability of THC in smoked cannabis is about 25%. In a cigarette containing 3.55% of THC, a peak plasma level of about 160 ng/mL occurs approximately 10 min after inhalation. THC is quickly cleared from plasma in a multiphasic manner and is widely distributed to tissues, leading to its pharmacologic effects. Body fat is a long-term storage site. This particular pharmacokinetic behavior explains the lack of correlation between the THC blood level and clinical effects, contrary to ethanol."

ARE HEMP AND MARIJUANA THE SAME?

Short Answer: Nope, no more than a St. Bernard is the same as a Chihuahua, or either are the same as a wolf. They are all 'dogs,' in the family of 'canis,' but different 'species' in the same kingdom, phylum, class, order, and family.

Marijuana and hemp are essentially two versions of the same species of plants from the genus: Cannabis.

However, much like different types of horses, dogs, snakes, roses, or tomatoes... they each have small genetic variations, which can be slight to significant. These differences often completely change what they do, how they do it, or assorted other differences often far more complex than just size, or color variations.



Typically, marijuana is grown to have high amounts of tetrahydrocannabinol (THC), which is a psycho-active chemical compound that generally 'mellowed' people out over centuries. The 'natural herb' that was made most popular during the 'hippy movement' of the 60's and 70's, and given infamy by the Cheech & Chong movies, and so many others, over the years isn't the same today.

The effects are often vastly different because of genetic tweaking, cross breeding with different strains, and more of a scientific genetic laboratory application to alter or improve the growing process. Their goal can be a variety of things, from enhancing the THC potency, improving flavor, calming harshness, increasing growth, or one of the other favors.

Bottom line: they aren't all the same, some aren't really even close from batch to batch.

Hemp, on the other hand, is bred specifically to have trace amounts of THC, low amounts, less than 3% is generally the goal, if it's 'industrial' grade. Certainly not enough to cause any psychoactive effect. The end products from hemp have been historically used to make rope, paper, clothing, biofuel, plastic composites, construction materials, animal bedding, insulation, netting, canvas, cardboard, and many other things.

Like bamboo, under the right conditions, both are extremely fast growing, easy to grow, easy to care for, and enriches the soil in which it grows. It's a fast, easy, hearty growing plant, with a wide variety of actual productive uses.

WHAT THEY CLAIM CBD OIL DOES:

It seems that the 'good stuff' the high quality, manufactured with cGMP (certified Good Manufacturing Practices) standards can actually help with many things neurologically.

EPILEPSY - Like lessening both the intensity and frequency of some forms of epileptic seizures, especially repetitive drug resistant debilitating seizures.

CANCER - There are also some that claiming it can create a positive impact on some types of cancers, though there haven't been any significant peer reviewed journal articles or studies demonstrating those claims are true without THC also in the mix. So those companies claiming JUST CBD Oil 'can do it' probably can't be trusted, or need to step up and **SHOW THE PROOF** supporting their claims.

CHRONIC PAIN - There are also claims that CBD Oil can reduce chronic pain, which while important... and seemingly supported with some science, people forget that pain usually occurs for a reason, as a sign of something structurally wrong; merely masking that pain doesn't eliminate the problem, only covers up some of the pain...

masking the symptoms, allowing the underlying problem to actually get worse. This latter fact is grossly ignored in most of the science, and sadly in nearly all of the marketing promoting CBD Oils.

MAGIC CURE ALL - CBD Oil is not a magic cure-all as so many claim; but it does seem to have some real science supporting some of the claims, surrounding certain forms of epilepsy, and Parkinson's, and even some chronic pains. There are far more actual benefits and uses than the 'Pet Rock' (another fad, which was never outlawed).



WHAT THEY CLAIM CBD OIL DOES:

Understand, while CBD Oils (by themselves) have a lot of science and significance in helping quell seizures – frequency and/or severity, calming nerves, and potentially helping give some pain relief or inflammation. There is no proof that it help improve, heal, cure, or even treat arthritis (despite the claims), may reduce the pain and mask symptoms, in some people; but allows the cause to get worse. It can impact the pain receptors in the nervous system, masking symptoms, No evidence of CBD Oil without THC positively impacting cancer.

Dr. David Meiri, the lead researcher on the Israeli cancer project, has been studying 50 varieties of cannabis, and their effects on 200 different types of cancer cells. He explains, “There is a large body of scientific data which indicates that cannabinoids specifically inhibit cancer cell growth and promote cancer cell death.” He also seems to be a huge proponent of the belief that THC **MUST BE** combined with CBD Oil to have much hope at fighting cancer cells. Acknowledging that the treatment is a **FULL-SPECTRUM** of products, for the 'entourage effect.' Co-Factors matter.

See the Dennis Hill, prostate cancer case (apply or believe at your own risk, as we aren't endorsing any of the information, and don't know anything about this specific case, other than what we've read). The presentation appears both interesting and compelling... and worthy of consideration. Mr. Hill used 1gram, split into half doses, twice a day with a 1:1 ratio of THC:CBD, for his daily dose.

<http://www.cureyourowncancer.org/dennis-hills-story-beating-prostate-cancer-with-cannabis-oil.html>



Kelly Hauf, says she used CBD Oil AND THC, to remove a brain tumor. Again, take it with a grain of salt, and with the necessary skepticism, as we don't know the case, the patient, any or the doctors... only the

WHAT THEY CLAIM CBD OIL DOES:

compelling story being told; and again note: it's BOTH THC and CBD, not one or the other.

<http://www.cureyourowncancer.org/the-kelly-hauf-story-how-she-beat-brain-cancer-naturally-with-cannabis-oil.html>

Tommy Chong, from Cheech & Chong, swears that Hash Oil, a proper diet, cured his prostate cancer.



Another Study in Spain used THC and CBD oil to treat cancers successfully, according to some of the doctors involved. “The International Medical Verities Association is putting hemp oil on its cancer protocol. It is a prioritized protocol list whose top five items are magnesium chloride, iodine, selenium, Alpha Lipoic Acid and sodium bicarbonate. It makes perfect sense to drop hemp oil right into the middle of this nutritional crossfire of anti cancer medicines, which are all available without prescription.

<https://www.principesactifs.org/spain-study-confirms-cannabis-oil-cures-cancer-without-side-effects/>

Dr. Abrams, a leading oncologist at University California's UCSF Osher Center, says he has seen cannabis help many with the side effects, but cautions against assuming it is in anyway a cure. He, more specifically said, “If cannabis definitively cured cancer, I would have expected that I would have a lot more survivors.” No wiser words spoken (or written).

There are studies, like the 2015 journal article, in *Oncology Reports*, showing success in CBD+THC (1:1 ratio) in treating early stages of Prostate Cancer. You can find the abstract here:

<https://www.spandidos-publications.com/10.3892/or.2015.3746>

With more states legalizing it, and the federal government not pursuing convictions as it had been in the past, we'll be seeing even more actual peer reviewed studies, abstracts, and articles... proving and even disproving, speculations and hypothesis that have been discussed in the shadows for years.

Pay attention, as some vital information may help you or your loved one in the future.

IS IT LEGAL?

“You have to know your local law.” Is NOT the simple or sure answer, because there are many other factors to consider, such as federal laws, and INSURANCE RULES! Which includes Workers Comp, and the potential liability if there is ever an accident you might someday be party to.

If you are in a state that it's 'legal' – then odds are, at the state level, it will be treated much like alcohol is. If you don't have intoxicating levels in your system at the time of the incident, and weren't indulging at the time, it's not likely to be a problem. However, because it is still against Federal law, I'd be careful assuming you're 'golden' (or in the clear), unless you have a pile of money and a great attorney, IF anything ever come up. Understanding it's currently illegal under Federal Law is vital.

Remember, alcohol is legal (if you're over 21), but if you're intoxicated and your actions cause someone to be harmed or other people's property to be damaged... your guilt, punishment, and culpability will likely be higher... and the resources available to help you will likely be fewer.

So, thinking 'it's legal' even if you're living in

one of the states that has legalized recreational use, doesn't mean you can't still have problems.



That is a loaded question, which potentially has a variety of valid answers on both sides. The reality is that it depends on the THC content, or does it? Effective in January 2017, the DEA (which typically refers to marijuana by the plant's scientific species name, *Cannabis sativa*, or the Reefer Madness-era spelling “marihuana”) made a rule stating its marijuana scheduling includes “marihuana extract.” In the rule, the agency defined “marihuana extract” as an “extract containing one or more cannabinoids that has been derived from any plant of the genus *Cannabis*”—which would include CBD.

IS IT LEGAL?

Truly 'pure' CBD oil will not show up on a drug test, *might* be a true statement; HOWEVER, some manufacturers really don't get all of the THC out, and there is no such thing as absolutely 0% THC in CBD oil. The really high quality stuff is less than 1% THC, with the absolute best testing out at 0.00003% (3/10000ths of 1 percent) for THC content, which isn't likely to ever show in any blood or urine test. However, there is a whole lot of inexpensively made stuff that has tested out at 3-5%, which is a huge difference and can show (in tests).

So, just how positive are you that there is really NO THC, IF a test is ever legally demanded.

THC is absolutely an ingredient and component of CBD oil... the starting plant AND the processing determines how much THC there really is left in the CBD oil. The quality of the processing is the key, the potency can also play a roll.

We've seen stuff being sold at levels from 100mg per bottle, per ml, per eye dropper, per drop. (The latter two are generally massively expensive, but usually the purest in reasonable doses).

CBD oil in Virginia is technically legal, so long as it contains less than 5% THC; however, in South Carolina, anything over 0.9% THC is illegal to possess. But the reality is that it is all still illegal, at any THC level (including absolute zero) because of the Schedule 1 listing under federal law, merely because it's a 'component of' the cannabis plant.

The problem is there is little consistency in the manufacturing process, or among brands. We've seen the test results of a couple different brands... with very different results. That QA (quality analysis) is real important, and hopefully accurate... because the manufacturer (at this time) has little liability for any 'mistake' in actual THC levels found within your body, as they can't control what OTHER THINGS you do... and if push comes to shove, they will claim it is YOUR FAULT if you lose an insurance claim, benefits, or are somehow found to have too much THC in your system.

IS IT LEGAL?

The right amount of quality CBD Oil can activate receptors in the brain that THC can't: such as, the adenosine, serotonin, and vanilloid receptor.

When introduced into the body, here's what those specific receptors do:

- CB1 and CB2 - are Class A G protein-coupled receptors (GPCRs), naturally occurring within mammals bodies, they impact (and effect) the dopamine receptors. Science has shown these receptors regulate and directly impact learning, coordination, sleep, pain, and the immune system.
- the adenosine receptor - resultant brain activity reduces anxiety.
- the serotonin receptor - reduces depression, alters blood sugar levels, limits nausea, and a whole host of other neurological and biological effects.
- the vanilloid receptor - limits the 'feeling' of pain and inflammation, masking symptoms.

Studies have proven that cannabidiol does NOT affect short term memory loss;

however, THC does.

“For those in the over 50 crowd, that might have tried marijuana in the 60's or 70's, it's important to understand that the stuff today is NOT THE SAME! In fact, studies, such as those done by Goulle and Guerbet, have shown that the THC level has risen by a factor of 4, from 4% to 16%, over the last 20 years [speculating that there was another rise in potency in the 20 to 30 years prior to that]. Their research showed that, "This increase has important implications not only for the pharmacokinetics but also for the pharmacology of THC The mean bioavailability of THC in smoked cannabis is about 25%. In a cigarette containing 3.55% of THC, a peak plasma level of about 160 ng/mL occurs approximately 10 min after inhalation. THC is quickly cleared from plasma in a multiphasic manner and is widely distributed to tissues, leading to its pharmacologic effects. Body fat is a long-term storage site. This particular pharmacokinetic behavior explains the lack of correlation between the THC blood level and clinical effects, contrary to ethanol."

BIGGEST CONCERN:

As of today, September 2018, 20 states and DC have legalized medical marijuana, and 9 states plus DC have legalized recreational use.

However, it is still illegal at the federal level, which has created a great deal of tension between the state and federal levels, and a valid conundrum for any thinking person. Because of these legal differences, there are potentially greater concerns that could impact every American over about age 15:

- 1) **WORKERS COMP:** When you could get hurt, are involved in, or cause an insurance claim – causing or a party to, any accident that could harm either

another person or valuable property, YOU will likely be required to be TESTED – for both drugs and alcohol. As of today, any THC found, even in legal states, COULD prohibit you from getting coverage or benefits... job insurance, loss wage protections, or any disability claims gone forever, just because THC is found in the test(s). So far, only five states—Connecticut, Maine, Minnesota, New Jersey and New Mexico—officially require insurers to pay workers comp claims involving medical marijuana; and then it's not a 100% guarantee... depending on the job, the situation, and the level of THC in the system. That one



BIGGEST CONCERN:

factor should give anyone cause to step back, and consider the odds, and the chances of any accident on the job. However, it's within the rights of every employer to implement a drug-free workplace policy, which gets them wage premium credits in many states, and allows them to limit their risks, liability, and reduce accidents if people are working even partly intoxicated.

The Americans with Disabilities Act (ADA) protects most employees with serious medical conditions from being discriminated against. However, it does not enable them to otherwise use marijuana, even with medical card or doctors approval, when there is a clear ban by the federal government on use of cannabis in any form.

THC in marijuana can stay in the bloodstream for up to 40 days; therefore if a worker is injured on the job and asked to take a drug test, the results may come back positive even if they haven't ingested cannabis in several weeks. And a positive drug test can have terrible consequences on an injured worker's compensation amount.



In just one example, where cannabis was legalized by the state, In fact, Colorado's workers compensation statute specifically states that an employee testing positive for THC can lose up to 50 percent of wages and benefits if it is determined that the injured worker may have been impaired due to marijuana.

In Oklahoma, WCC found there was no evidence presented to show a claimant was high on the day he was injured, nor was there

BIGGEST CONCERN:

any evidence to show the marijuana in his system was the “major cause” of his injury. However, WCC denied his workers' comp benefits anyway. The reason: A newly created Oklahoma workers' comp law honoring the FEDERAL DRUG LAWS.

- 2) INSURANCE CLAIMS: - While it's been pointed out that insurance covers the stupid, and accidental accidents... however, it does not cover the guilty in criminal acts, like driving drunk or under the influence of drugs. Those choices could cost you, personally.

Insurers, in many states, are allowed to deny certain claims – in all or part – if alcohol or drugs are shown to be involved in the accident or action that caused the claim. Particularly if the claimant(s) are the ones intoxicated. "Wherever you're 'in public' – off your own property, especially, you need to understand the statutes and state laws that apply, so that you're aware of the consequences of your actions

- 3) LIFE INSURANCE CLAIMS – be aware of the exclusions list, because right now, nearly every policy has an over generalized exclusion of 'any illegal

drugs.' While many policies will merely charge a higher rate for marijuana users, and honor the policy (if disclosed), there have been some dispute cases, where the insurance company claims “Material Misrepresentations on the Application.” A few families have hired attorneys and won; a few lost.

Whenever there is a question on a life insurance application you should be honest, and fully disclosed. It is better they turn you down, or raise the premiums, than to have your loved ones thinking everything is 'in order' only to fight about things after the fact. Life insurance companies are not required by law to either report or investigate when they issue a policy, they usually take an applicant's answers as true. If there are questions, check with an attorney to be sure of what the rules are now. Federal and State Group Life Insurance Claims are often controlled by federal statutes.

- 4) VA (Veteran's Affairs) and Drug Testing - Aside from the potential loss of VA Benefits if the wrong persons chooses to make an issue of any THC found in the blood stream, derived from unapproved consumption. This only impacts the

BIGGEST CONCERN:



Veterans actually getting VA Benefits or using the VA Hospitals. Some officials in the VA have chosen to 'look the other way' in some areas, but I wouldn't bank on it. Because all it will take is one wrong person to find some illegal substance in your system, and it could become a lifetime of benefit denials.

The VA (Veteran's Affairs) doesn't seem to have an official ruling on this topic. Ultimately it's against federal law, and there is no consistency with the 'drug testing' the VA does.

Considering the VA cut millions of veterans off prescriptions for chronic pain management in 2015 without warning, anything is possible.

The VA forced hundreds of thousands of Veterans to cold turkey off their chronic pain meds. This necessarily increased veterans self-medicating with alcohol and 'street drugs.' Some were offered alternatives, but all weren't. Even moving to a state where marijuana and CBD oils are considered legal may not be a valid solution, because when the VA tests, they test for everything – all illegal drugs, and levels of those prescription drugs the veteran is supposed to be on. To verify you're really taking them. Some of the VA hospitals have stepped up their drug testing, but many in the 'legal states' aren't testing as strictly for THC content.

Personally, I wouldn't bet anyone's continued VA benefits on what the VA is doing, or the thoroughness of the third party test requested. Would you? I will tell you what I told family members & friends that go to the VA for healthcare services: “STAY CLEAR until and unless the VA officially approves it... because YOU GET VA STUFF FOR FREE! You paid for it with your service,

BIGGEST CONCERN:



and honorable discharge, but it is taxpayer's money out of a budget they are often trying to cut costs in. And, to most of them, you are just a number, and now potentially not a positive one.

If someone at the VA approves it, make sure you get it in WRITING! Because it's ultimately your word against theirs. Guess who wins if there is a dispute?

They could be looking for excuses to kick people off the 'free programs' in some regions at a moment's notice... because of budget cuts or no reason at all, especially people that had chronic pain issues. Chronic costs."

Federal law does not yet recognize medical marijuana, or offer a blanket approval for CBD Oils, all drugs are still regulated through the Controlled Substances Act (CSA) (21 U.S.C. § 811).

The act does not currently recognize the difference between medical and recreational use of any 'drug' - including marijuana, marijuana treats, and CBD Oils... and the federal government can treat them all like all other controlled substances (such as methamphetamine or heroin).

Under the Act, every controlled substance is categorized according to its relative potential for abuse and medicinal value. Under the CSA, marijuana is still classified as a Schedule I drug, or highly addictive and having no medical value.

The ONLY *maybe* exception *might* be for those people officially taking a FDA approved PRESCRIPTION DRUG, which might contain THC; but even that hasn't been defined.

Cannabis plants are known soil remediates. That means that they will suck up any and all toxins in the soil they are grown in, including any chemicals used to fertilize, any pesticides, and any herbicides. Hemp 'cleans' the soil, and it's great at doing just that. Therefore, it's also important to know where the cannabis based products you're using is actually grown, because there are many countries with water we don't want to

BIGGEST CONCERN:

drink. Clean soil, awareness to the growing conditions, and responsible manufacturing are vital to safe product.

When used responsibly, manufactured responsibly, at doses under 300mg a day for people with Parkinson's, under 600mg for most others, it seems to be safe... based on multiple safety studies done over the last 40+ years. To date, there has yet to be any (even one) reported case of 'over dose' from either marijuana or CBD, but there have been thousands of reported over dose and serious side effects cases from the synthetic and FAKE STUFF!

1980 STUDY IN PHARMACOLOGY was one of the very first studies published regarding CBD Oil. They published their findings conducted on eight volunteers, during a study in which they tested 15 patients with epilepsy and chronic seizures (23 total people). The goal was to determine safety, specifically looking for any side effects of CBD Oil when consumed daily, at high doses, for a month. Their reported conclusions were, 'All patients and volunteers tolerated CBD very well and no signs of toxicity or serious side effects were detected on examination.'

1986, INTERNATIONAL JOURNAL OF NEUROSCIENCE, published other studies. Their results: oral doses, ranging from 100 to 600 mg per day of cannabidiol were given to five patients with pre-existing dystonic movement disorders. In addition to recording specific benefits to those people. The study uncovered mild side effects with doses of 600mg of CBD and higher. They appeared to cause things like: hypotension, dry mouth,



psychomotor slowing, lightheadedness, and sedation. During the study 2 patients with Parkinson's given CBD Oil, to quell their shakiness, in doses over 300 mg per day seemed to actually experience AGGRAVATED symptoms. Yet in 2014 a separate paper described how CBD significantly improves the lives of those with Parkinson's disease, so the verdict is still out on how much may (or may not) help those with Parkinson's. It's entirely possible it's based on a variety of

BIGGEST CONCERN:

other factors, such as diet, supplementation, age, weight, severity of the problem, location, exercise, genetics, etc.

IN 2011, AN ARTICLE PUBLISHED ON MEDICINAL GENOMICS, stated that Grapefruit and CBD have a similar effect on P450, a key liver enzyme that metabolizes some drugs in the human body, particularly hepatic drugs. When large doses of CBD were taken it seems to inhibit the metabolizing properties of P450, which temporarily neutralized medicinal effects. It is also believed that this is also the reason the effects of THC are counteracted when large doses of CBD Oil is ingested.

Even the government regulated legal marijuana, in the states where it is legal, large amounts have tested positive for herbicidal toxins. Perfectly delicious sounding edibles, in those states they are legal, tested positive for with toxins from irresponsible, hurried, or unprofessional processing.

So, the answer really depends on the safety and process of the producers, harvesters, processors, and manufacturing. Just how careful (and aware) are they?

Without any regulation, aside from how many plants do they have, how much product they are producing, and are they paying all the taxes they should... most states don't care about the rest of the stuff, so long as the product isn't quickly killing people. As of today, any and all testing is either up to the manufacturer (then only those wanting to justify their quality), or some third party looking to stop (or block) the legalization.

If there were responsible state tests, and reasonable federal guidelines, and some consistency in labeling, there could be hope. However, without some rational 'self-regulation' and honest reporting within the fast growing and manufacturing industry, it will only take one or two screw ups to make things impossible.

If the producers aren't careful, their industry could become riddled with over regulations, driving the time to comply, and money costs, up even higher. You might ask the manufacturer if they have a QA (quality analysis) for that particular lot they'd be willing to email or fax you. Some will, most won't – because it contains (or should) some proprietary information about their strain,

BIGGEST CONCERN:



their formula, what makes their product unique. They are even less likely to share this information if they don't know you. But more sadly, some won't have a clue what you're talking about, as they don't do any testing. As an end-user, that might be an important piece of information to have.

SERIOUS WARNING: EARLY 2018, there were 51 reports of OVERDOSE in Utah, another 60 cases in North Carolina. However, all cases were linked to a product labeled “CBD” “K2” or “YOLO,” and a variety of other names, usually coming straight from China. These products did NOT really or honestly CONTAIN any Cannabinol (no actual CBD Oil), but instead synthetic chemicals designed to

'create a HIGH' – like marijuana, rather than heal, help, or quell any symptoms. These fake products are sometimes ignorantly sold in vape shops, head shops, even small corner stores, and on the streets, or through some schools.

https://www.cdc.gov/mmwr/volumes/67/wr/mm6720a5.htm?s_cid=mm6720a5_x

YOLO used a synthetic substance called: 4-cyano CUMYL BUTINACA, but other chemicals found in some of the products were one of many synthetic cannabinoids such as JWH-018, JWH-073, JWH-200, AM-2201, UR-144, XLR-11, AKB4, cannabicyclohexanol and AB-CHMINACA, AB-PINACA or AB-FUBINACA. Even the prescription drug, phenazepam, has been found in some products.

The most popular brands sold today are Spice and K2, but the product 'Spice' has been reportedly sold 'private label,' under more than 600 names including Mojo, Scooby Snax, Black Mamba, Spike, Annihilation, synthetic cannabis, fake pot, synthetic marijuana, legal weed, herbal incense and even potpourri.

BE AWARE! To date, more than 1,000 kids, ages 12 to 18, have reported serious side

BIGGEST CONCERN:

effects, with some being hospitalized. They (or their parents) have reported serious adverse reactions, such as: altered mental status, actual seizures, dysphoria and confusion, loss of consciousness, severe hallucinations, and even suicide. It's often packaged in a plastic packet that looks like a condom wrapper, or is sold in liquid form in a small dropper bottle that looks like normal vape juice, often with blue raspberries on the label.

Each of these 'fake' products have different issues, concerns, and potential side effects (RANTS – see HerbsAreDrugs.com for further explanation).

According to the CDC, the median time to onset of adverse reaction to these synthetics was usually within just minutes (often 1 to 5). The duration of adverse reaction lasted a median of 72 hours. The top adverse reactions reported were: altered mental status (82.4%), nausea or vomiting (49.0%), seizures or shaking (27.5%), loss of consciousness (25.5%) hallucinations (23.5%), and even SUICIDE! (the later didn't disclose a specific number)

Check out this media report for some information: https://www.youtube.com/watch?time_continue=10&v=dSI-QU4U62E

In liquid, usually a vape or droplet bottle (none reported with eye dropper), some of these synthetic products have a greater variety of chemicals... even within the same 'brand.' Scientists suspect a few brands may even contain traces of synthetic psychedelics such as 2C-P. In 2008, an analysis by the German government showed that some products contained almost none of herbs actually listed as ingredients on the packaging.

When it comes to any 'synthetic' or 'herbal' remedies, it's always BUYER BEWARE!

Sadly, note the age group most often targeted, 12 to 18... too young to know any better, unless the very real world dangers and concerns are taught to them before temptation gives into opportunity.



DIFFERENCES IN MANUFACTURING PROCESSES



There are two primary ways CBD OIL is extracted. 1) Using high pressure (squishing, not washing), and 2) Solvent-based extraction.

Pressure extraction has been used for centuries, for flax seed oil, linseed oil, sesame seed oil, peanut oil, etc. etc. Sometimes high temperatures are used, sometimes temperatures are created in the cold processing if things are rushed (from the friction).

Solvent based extraction involves allowing the solvent to break down the components, and burning off the solvent, so CBD remains. There are a variety of solvents that can be used, ethanol and butane are used the most often. This is generally the most common method, and least expensive.

Personally, we believe the cold-pressed method for extraction is generally the best method for any oils extracts from seeds, as it leaves terpenes undamaged.

There is a lot of science for other seed oils that absolutely support lower cold pressure processing over heat & high pressure, which is better than using any solvents.

There is a 'hot press' method, that is also common, using CO2 that is pretty popular, and also seems far better than solvent processing. It's faster, and less expensive than cold processing, and some claim it's nearly as good. The Flax seed producers don't agree, but agree it is way better than solvent still.

DIFFERENCES IN MANUFACTURING PROCESSES

One product label we evaluated: '_____ CDB Tincture 3000 mg 0% THC'. (company name omitted for obvious reasons) Yet, on the back side under the directions, it says: MCT Oil 99%+ pure CDB Isolate.

Upon looking that up, we learn that 'MedterrasCDB' is extracted from hemp grown under the Kentucky Department of Agriculture Industrial Hemp Research Pilot Program, which was established under the guidelines provided by Section 7606 of the Agriculture Act of 2014(7 U.S.C 5940)" And reports that "What extract without THC" really means is that when tested, their extract has UNDETECTABLE amounts of THC.

However, undetectable does not mean Zero. It means that there is .0000001% to 0.3% of THC, or a fraction of a percent. It means that the test they used to measure the THC, in the fashion they tested it, did not detect any THC. But, technically, the reality is that SOME *MIGHT* still exist in an exceptionally minute traces.

Just like there is 100% pure gold or silver, or McDonald's puts just 3 pickles on their burgers 100% of the time... it's all marketing hype, not 100% reality.

At upwards of \$150 a month (for the average, non-epileptic person)... and the marketing



DIFFERENCES IN MANUFACTURING PROCESSES

hype that isn't 100% honest, though many of the high-end products seem to be about 99.97% honest. If seizures or severe chronic pain was involved I'd absolutely consider trying it. Especially IF I wasn't getting federal benefits. If, however, I was getting such benefits, or had a job that regularly did drug testing, OR had a job that could easily or reasonable be considered somehow dangerous, I would absolutely stay away from it, unless I had their approval IN WRITING or was willing to gamble those benefits. The struggle is trusting anything that claims 100%, and fails to have proof. Ultimately, it's your life, your illness, your pain, and risking your benefits.

- Let's take it all back to the basics. The hemp related products utilize an extract from hemp. Hemp naturally has some level of ALL the cannabinoids, even THC. So, to make a hemp extract product with “no thc”, the thc will have to be removed. Simple enough, in theory. You should question how natural the processing is, and whether it can really get all of it out. Reality is the growers have developed a strain of hemp that is naturally almost completely “free of thc”.



This latter scenario is actually being done quite a bit these days. And, due to the government regulations requiring the $<0.3\%$ THC, and consumer is demanding a product they could use, without THC and without smoking, so some medicinal use might be had without worrying about the law, prejudices, or legal problems. It's not a standardized process, or consistent in the industry. As you see when you look at all the different levels that exist, the different products and claims, and variety of manufacturer's trying to cash in, particularly those from other countries. The penalty for being wrong falls upon the end-user, no one else. Not the grower, manufacturer, or persons labeling the product.

Being Legal in certain states is meaningless to people getting VA benefits, because they are FEDERALLY controlled.

DIFFERENCES IN MANUFACTURING PROCESSES



As the VA's requirements, and testing, are different. In general, the Basic Policy in some state VA hospitals seems to be to look the other way. However, there are no guarantees that can't (or won't) change without notice. If your PC doesn't have a problem with it you are good, but you should check with them. That said, it's still federal law so VA has to abide by it (as they want). That was what a High Level VA Doctor said on the topic; different doctors may check and or not.

However, since the VA has stopped handing out the prescription pain killers as freely, frequently, and in the quantities it was... some facilities have seemingly lightened up on the use of quality CBD oils. Especially since President Trumps, Executive Order authorizing experimental medication use, There are quite a few promising studies, but

the inconsistency between manufacturers and differences in batches (even from the same manufacturer) are wildly different, varied and real. It's our opinion, and observation, that there are way too many inconsistencies in the production and processing of CBD oil. Further, the reality is that it is still against Federal law, and state laws in 42 of the states (though it appears that is likely to change in many more states, and potentially federally within the next decade... rendering the legality issue moot).

Sadly, it seems to be more like the 'gold rush' for many manufacturers, with many passing off iron pirate (fools gold), or low quality gold riddled with impurities. While there seems to be the potential of quality CBD oil out there, the reality is they aren't all the same... and it's another 'snake oil' scheme in some cases; for some, it's the latest MLM pyramid scheme for those hoping to 'get rich quick' off those suffering.

COLORS OF CBD OIL IS TELLING:

The colors and consistency matters, and can tell you a great deal about the quality of the product you're getting.

RAW - is uncut, with only the toxin or impurities in the soil and used in the extraction process. It is dark green to dark brownish black in color.

DECARBOXYLATED - all the above toxin potential, but it's been heated up. Some say this is better potency in making the oil. It's usually a golden brown to dark brown in color.

FILTERED - goes through the most processing, usually containing any of the same toxins from the soil or processing (as above), but all phytochemicals and plant materials are filtered out. Some claim this is the highest quality, and commonly referred to as 'gold' CBD. It's generally thick, but not quite as thick as honey.

CUT - The problem is that 'filtered' is also the easiest to 'fake,' by cutting with almond or coconut oils, or other substances, making it more like a 'runny gold' - more like vitamin e oil, fish oils (omega).



SENSES FACTORS –



Just exactly what does it FEEL, SMELL, and TASTE like? Those things matter . . . and can impact the quality, potency, and consistency of the product.

FEEL – it shouldn't be as sticky as honey, but also not as slippery as fish oils.

SMELL – It shouldn't smell like coconuts or fish if it's supposed to be pure.

TASTE – it shouldn't really taste fishy. That means it's likely cut with omega fatty acids.

We've found that some of the best, and most reputable CBD manufacturers generally do testing, for THC levels, as well as common toxins. And we've found that some will make the results available to buyers, and prospective accounts that have a reasonable reason for their request.

SENSES FACTORS –

The labeling on CBD Oil is wild, inconsistent, and often deceptive.

We've seen bottles being marketing from 50mg to 5000mg to consumers.

The bottles might be different sizes, 5, 10, 30, 60, 100, 120, 250ml seem to be the most common sizes.

It is usually found in a 30ml bottle; which, if there is 3,000mg per bottle, that works out to 100mg per ml in the bottle is 30ml... but only 12mg/ml if those 3,000mg are in a 250ml bottle. That's a huge difference!

This size and strength of bottle seems to currently retail for about \$150 to 200 a bottle, and nearly always has an eye dropper, which generally measures just 1 ml with a normal squeeze.

However, I've seen bottles labeled xxx mg's... that were never clear where those milligrams claims (and calculations) were coming from. This is especially true with the stuff in flea markets, swap meets, and companies that are targeting low-end customers with limited budgets.

Is the mg listing they claim per bottle, per oz, per ml, per dropper, per drop, or something else? It's unclear on a whole lot of bottles we've seen. If you're going to be using this type of product, **YOU NEED TO KNOW**, and be aware.

The differences are huge... in potency, value, effectiveness, and potentially safety (especially for Parkinson suffers).

WHY MD'S CHOICE DOES NOT SELL IT:



MD's Choice, is focused on nutrition. Over the last five years, we were bombarded with 'offers' to add CBD Oil to our line, but purposefully haven't, and won't, unless it's 100% legal by state and federal laws... and maybe not even then.

We had the opportunity to look into it more, to see more of the science behind the scenes. We believe it is important to acknowledge what the science shows it can actually do, and also discuss the known real world limits. CBD Oil focuses on NERVES, and interacts with the brain. It's shown promise for treating certain types of Epilepsies, to the point the FDA has officially approved a 'drug' product made of 99.7% CBD as the primary active ingredient for the treatment of epilepsy.

FDA approval doesn't guarantee 'it works' in any fashion, or that it's even necessarily

safe... however, their approval does guarantee some more (and likely better) research, closer evaluation and scrutiny, and the reality of an opportunity to do good.

MD's Choice spent more than 20 years focused on two primary goals:

- a) trying to help spread ethical & scientific education of others on the topics of health & nutrition, as well as
- b) to design and distribute quality supplements targeting specific ailments (joints, digestion, reproduction, and general health) that actually helps in the right way – by supplying the body the nutrients it needs, in forms it can readily use, to assist the body in healing itself when possible.

MD's Choice absolutely understands the benefits of medicine, quality, process, consistency, purification, production, and usefulness.

We strive to pay attention to things that can improve health, quality and longevity of life; and will attempt to share that information with others, as it becomes available.

HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):



It's always tough to figure out where to 'put' the history, at the beginning where it technically belongs, or toward the end, because most people don't care, or will just skim over it. Since much of this information was 'new to us' prior to the research for this article, we believed it would be helpful to understand a bit of the history that has led up to where things are – legally – RIGHT NOW. We believe it will also help you understand some of the directions things are likely to go in the next three to eight years, as more science is released... and more facts become publicly known. Things have really come a long way.

CHINESE HAVE RECORDS DATING BACK TO 8,000BC (in Taiwan to be specific) for assorted uses of hemp. It deals with using hemp for building materials, clothing, shoes, as well as medicinal use. Descriptions

written in the world's oldest pharmacopoeia “Pen Ts'ao Ching” (written first century AD), suggest ancient Chinese cultures recognized benefits of hemp, and was also the first record to differentiate between 'industrial hemp' and 'marijuana' (male vs female plants... 'Industrial' vs 'medicinal' uses).

MEDICAL USE WAS FOUND FIRST IN WRITTEN RECORDS IN 2,737 BC, in specific references and directions of the Emperor Shen-Nung, who used specific parts of the female plant to make teas for medical use, as a natural pain treatment; as well as a topical, to apply as a poultice or ointment for rashes and irritation.

Again, in the written HINDU TEXT “ATHARVAVEDA,” SOMETIME BETWEEN 2,000 AND 800 BC (exact date is disputed). Hemp was described as one of the '5 sacred plants.' Along about the same time period, ancient text was found, written by the Egyptian's, demonstrating hemp oil was an ingredient for eyewash.

All that rolls back some serious history, and effective use throughout the centuries.

HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

From then, until 1616 WHEN THE FIRST CROP WAS DOCUMENTED ON NORTH AMERICA, it's been grown and used for a wide variety of things. At one point, the Virginia Assembly established that ALL CITIZENS were REQUIRED to grow hemp. By 1776, the plant was accepted as legal tender in Maryland, Pennsylvania, Virginia, and Kentucky. By 1800 EVERY state of the newly formed United States, was actively growing industrial hemp on huge scales. The third edition of the US Pharmacopeia, 1851, listed hemp extract among its medicines.

1906 PRESIDENT THEODORE ROOSEVELT ENACTED THE "PURE FOOD AND DRUG ACT" (START OF THE FDA). The goal was well meaning: "to ban foreign and interstate trafficking of adulterated or mislabeled food and drug products." To establish some safety guidelines, 'to protect the people,' so they

claimed. It specifically listed 'non-medical cannabis' as a poisonous drug. Many didn't agree, even within the government. If you're curious, look up the 1914 'Hemp Note' – actual Federal Reserve Currency, depicting hemp cultivation here in America.

The design of that 1913 FEDERAL RESERVE NOTE (AKA TEN DOLLAR BILL) WAS DESPITE CALIFORNIA, passing a law prohibiting the use of marijuana. The State Board of Pharmacy sponsored the law, thinking they could target Mexican Americans living in the Los Angeles area, to either fine or imprison them OR to get them to leave the country.

In 1919, THE 18TH AMENDMENT WAS RATIFIED, BANNING THE MANUFACTURE, transportation or sale of intoxicating liquors, ushering in the Prohibition Era. The same year, Congress passed the National Prohibition Act (also known as the Volstead Act), which offered guidelines on how to federally enforce Prohibition. Prohibition (for alcohol) lasted until December, 1933, when the 21st Amendment was ratified, overturning the 18th. The question is how much did ALCOHOL industry have to do with taking out its competition, by pointing at drugs?



HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

In 1930, THE FBN (FEDERAL BUREAU OF NARCOTICS) WAS CREATED; and at the height of the Great Depression, cannabis was blamed (for the Great Depression and influx of Mexicans entering American). That was used to create a war on drugs.

THE 1936 FILM 'REEFER MADNESS' was released in an attempt to scare Americans into believing the plant was dangerous and the source of all societies failures, and should be outlawed.

With a bit of research, you'll find that THE MARIJUANA TAX ACT ORIGINALLY WENT INTO EFFECT IN 1937, a year after the movie. It strictly regulated the cultivation and sale of all cannabis varieties, including 'hemp.' The government imposed a tax levy of \$1 per ounce for medicinal use, and \$100 per ounce for nonmedical use (remember, those were 1937 prices: when gasoline was just \$0.10 a gallon, a brand new house cost under \$5,000m and the top of the line new car could be had for under \$800). It's been reported that the witness list for the hearings contained no one that had actually done any significant research into the effects of cannabis, it was all 'lynch mob' style voting based on emotion.

Mr. Anslinger, commissioner of the FBN, and led fear monger, testified that 'even a single marijuana cigarette could induce a homicidal mania, prompting people to want to kill those they love.'

The bill passed, Roosevelt signed it into law. Clearly, the Act was only a means to keep marijuana out of the hands of poor people, and minorities, who might otherwise use alcohol. It was also to create both fines and control (court processes & sentencing) for those caught in possession (growing or using) 'the non-taxed drug.' It's also interesting to note that the American Medical Association (AMA) opposed the Act in 1937, but weren't on the witness list. The AMA firmly believed the Act would absolutely impede further research into medicinal worth of cannabis products. But it was pushed through congress anyhow, and became 'the law or the land.'

By now, the government is trying to scare the youth away, promote the anti-drug crusade, and gain adult support from their law. So, in 1949 THE FILM "SHE SHOULDA SAID NO!" PRODUCED WITH THE APPROVAL OF THE FEDERAL BUREAU OF NARCOTICS, in conjunction with the US Treasury, to

HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

capitalize on the arrests of Lila Leeds and mega movie star Robert Mitchum on a charge felony narcotics possession. (Note: Leeds was charged, sentenced to 6 months in prison, with five years of probation... and basically black-balled from Hollywood. Then RKO studio chief, Howard Hughes, assembled a team of lawyers to defend Mitchum, who did his 6 months, and silently went back to work on some of the Hughes projects. His

record didn't destroy his career, but he was never the same again. This exploitation film followed in the spirit of other propaganda films such as the 1936 films *Reefer Madness* and *Marihuana*, attempting to 'scare' people from smoking Cannabis.

Generally, all cannabis remained a 'controlled substance.' In 1951, DR. HARRIS ISBELL, DIRECTOR OF RESEARCH AT THE PUBLIC HEALTH SERVICE HOSPITAL, DISPUTED THE 'INSANITY, CRIME, AND ADDICTION THEORIES' telling Congress that "smoking marijuana has no unpleasant aftereffects, no dependence is developed on the drug, and the practice can easily be stopped at any time." Despite the professional testimony, Congress pushed up



the penalties on growers, sellers, and end users.

Many of the states followed the federal example, and states like Louisiana, for instance, created sentences ranging from 5 to 99 years, without parole or probation, for the sale or possession of narcotic drugs. (Including marijuana). Their rationale wasn't that pot was deadly, highly addictive, or even promoted murder, as many previously claimed, but that it was a "STEPPINGSTONE" to heroin or other hard, nasty, and destructive drugs.

For the most part, as long as the laws and penalty was just targeting the minorities and poor people, most citizens remained silent; accepting heavy handed and unjust punitive approaches of the lengthy sentences for non-violent citizens, so long as it wasn't 'them' – or their child, brother, sister, parent,

HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

relatives they liked, or the person that signed their pay checks.

Then in 1970, RICHARD M. NIXON SIGNED IN THE CSA (CONTROLLED SUBSTANCES ACT) while many states softened on laws surrounding the use and possession of marijuana, the federal government pushed through that bill, making it a law. Which became stacks of regulations, new crimes, more fines, and stronger punishments; with exceptions only for the rich. It became a grand gesture, claiming to 'stop all drugs.' However, during a 1994 interview with John Ehrlichman, Nixon's domestic policy chief, who provided inside info stating that "The War on Drugs" campaign was initially designed to help Nixon keep his job. Ehrlichman was quoted as saying: "We knew we couldn't make it illegal to be either against the war or blacks, but by getting the public to associate the hippies with marijuana and blacks with heroin, and then criminalizing both heavily, we could disrupt those communities. We could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news. Did we know we were lying about the drugs? Of course, we did."

But when Nixon left office, so did most of his anti-drug rhetoric, for a time. Soon after his resignation, to avoid impeachment, the War on Drugs took a slight hiatus.

However, TOWARD THE END OF THE VIETNAM WAR (1955 TO 1975), AN ESTIMATED 30% OF THE US TROOPS ENGAGED in regular usage of marijuana; and, at home, weed made its way to the white college students, many of which were trying to avoid the draft. Seeing either war hero's or white lives ruined by the pot laws, with huge life ending sentences, somehow softened public attitudes when it became their sons & daughters, their relatives, and their peers.

Marijuana use became common place from the beginning of the 'hippy' movement, which pretty much coincided with the end of the Vietnam War. Weed, Pot, MaryJane, Marijuana, Smoke, became the topic of



HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

comedy, movies, and something safer than alcohol... that people could easily grow themselves. More for recreational use, as an alternative to alcohol, in the revolution of 'Peace & Love to All' crusade.

Between 1972 AND 1977, ELEVEN STATES DECRIMINALIZED MARIJUANA POSSESSION. Jimmy Carter ran on a political campaign to decriminalize marijuana, and won. Of course, he was a farmer... and understood the benefit of health crops, and growing profit... and the industrial use. During Carter's first year, the Senate Judiciary Committee “voted to decriminalize up to one ounce of marijuana.” This is one of the best things Carter actually accomplished, and few people ever mention it today.

Most states ceased all new criminal actions with 'pot' – and didn't really care about 'personal use' or 'home growers.' Some non-violent offenders were even released from prison & jail. That is, until NANCY REAGAN'S “JUST SAY NO” CAMPAIGN IN 1982. Thus putting the war on drugs back in the front, and then adding the proverbial steroids of political rhetoric backed by the power of media hype and spin, during the 1980 election campaign.

By then, most of the hippies didn't watch tv, or listen to the media, as they were out 'doing their thing' – starting their own 'save the planet' and 'love the world' campaigns. So the hard headed, beer drinking, blue collar working class and prude politicians that hated hippies, minorities, and really had no honest experience with 'weed' – other than 'Meathead' types (liberal college kids), were readily manipulated by the alcohol industry, and helped vote in people that pushed through laws to “stop those hippy's” from Easy Rider, or those “Mexicans” from Cheech & Chong's various films. They labeled their 'gate-way' and 'stepping stone' drug (pot), which they seemed convinced absolutely led to LSD, acid, heroin, and that cocaine stuff those machine gun toting gangsters were using to take over this nation in Scarface.

The government officially classified all forms of cannabis — 'including industrial hemp — as a “Schedule I Drug.” That instantly made it illegal to grow, sell, and use in the United States.

This one action devastated a whole lot of legal farmers, and agribusinesses. It also forced many American industrial

HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

manufacturer's to either re-tool for other raw materials... or import hemp from other countries. Which was still legal, so long as it contained THC levels at, or below, 0.3%. Because it seemed the government thought it was easier to condemn all grown in the USA, but promote cultivation (and trade) in the European Union and Canada. Clearly punishing American farmers.

In 1986, CONGRESS PASSED THE “ANTI-DRUG ABUSE ACT” (ADAA). This bill established a minimum mandatory prison sentences for certain drug offenses, and then proceeded to pack our nations prisons with non-violent offenders for years.

In 2014, OBAMA SIGNED A FARM BILL INTO LAW, WHICH ALLOWS FOR THE CULTIVATION OF HEMP in states that have already enacted pro-hemp legislation. This is key, because for the first time since hemp and marijuana were classified the same in 1970, a bill in the U.S. government that passed into law, finally acknowledged a chemical difference. The Bill allows state departments of agriculture and institutions of higher education to cultivate industrial hemp for research purposes. The Bill specifically defines industrial hemp as— “The plant Cannabis

sativa L. and any part of such plant, whether growing or not, with a delta-9 tetrahydrocannabinol (THC) concentration of not more than 0.3 percent on a dry weight basis.”

By 2018, WITH MULTIPLE STATES LEGALIZING SOME TO ALL MEDICAL USE (20+DC, SOME ARE STILL VERY LIMITED), and a few legalizing recreational use (9+DC). It seems that the war on marijuana and CBD Oils might be coming to an end soon; which will necessarily increase the science, studies, stats, and research hopefully answering a variety of questions that have remained unanswered for decades. However, like most things, it's all subject to change, based on the politicians in power and the cry of the general public claiming to be behind those politicians (law makers). Other than the specifically limited labels the



HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

This one action devastated a whole lot of legal farmers, and agribusinesses. It also forced many American industrial manufacturer's to either re-tool for other raw materials... or import hemp from other countries. Which was still legal, so long as it contained THC levels at, or below, 0.3%. Because it seemed the government thought it was easier to condemn all grown in the USA, but promote cultivation (and trade) in the European Union and Canada. Clearly punishing American farmers.

In 1986, CONGRESS PASSED THE “ANTI-DRUG ABUSE ACT” (ADAA). This bill established a minimum mandatory prison sentences for certain drug offenses, and then proceeded to pack our nations prisons with non-violent offenders for years.

In 2014, OBAMA SIGNED A FARM BILL INTO LAW, WHICH ALLOWS FOR THE CULTIVATION OF HEMP in states that have already enacted pro-hemp legislation. This is key, because for the first time since hemp and marijuana were classified the same in 1970, a bill in the U.S. government that passed into law, finally acknowledged a chemical difference. The Bill allows state departments of agriculture and institutions of higher education to

cultivate industrial hemp for research purposes. The Bill specifically defines industrial hemp as— “The plant *Cannabis sativa* L. and any part of such plant, whether growing or not, with a delta-9 tetrahydrocannabinol (THC) concentration of not more than 0.3 percent on a dry weight basis.”

By 2018, WITH MULTIPLE STATES LEGALIZING SOME TO ALL MEDICAL USE (20+DC, SOME ARE STILL VERY LIMITED), and a few legalizing recreational use (9+DC). It seems that the war on marijuana and CBD Oils might be coming to an end soon; which will necessarily increase the science, studies, stats, and research hopefully answering a variety of questions that have remained unanswered for decades. However, like most things, it's all subject to change, based on the politicians in power



HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

and the cry of the general public claiming to be behind those politicians (law makers). Other than the specifically limited labels the FDA has approved for medical use, the FDA and DEA have not accepted cannabis, in any form, or delivery method, as any actual medicines. Though it is clear that most voters understand the difference between 'pot' and 'other drugs' ... and more people are seeing the absolute difference between good CBD Oil vs pot.

There is a movement in America actively pushing for legalization of all forms of marijuana, including CBD Oils (that really are what they say that are).

That change will likely happen, but it's not quite there YET. (But elections are just around the corner, and I do believe there are more states pushing for legalization).

The problem is that most people in the 35 to 65 age range KNOW absolutely that pot is foundationally safer than alcohol, but most don't understand the difference between the 'pot' of today... and that of the 60's, 70's, or even 80's. Similar significant differences exist with the CBD Oils... as to quality, consistency, processing, and actual THC levels or other ingredients. It will be interesting to see how that works out.



HOW IT STARTED (SOME BORINGLY INTERESTING HISTORY):

Well, there are multiple industries that love the 'war on drugs' (not necessarily in any specific order).

A) ILLEGAL DRUG SUPPLIERS/MANUFACTURERS – so long as the government helps keep the supply low, and the addicts and ignorant keep the demand up, the price will always be as high as possible, which in turn promotes the side effect of crime... so the addicts can pay for their habit.

b) HERBAL SUPPLEMENTS (PROMOTING SYNTHETIC HIGHS) – targeting those people that want to 'be legal' and 'above the law,' yet want to 'kill their pain' – escape their reality – or have more control for less cost (in their mind) than alcohol offered them.

C) DRUG TESTING INDUSTRY – who would have thought? But the reality is that either the government or employer requires the drug tests... and sometimes the hospital for treatment purposes, or the police for their self-protection (or criminal charges). Sadly, it's often the 'tax-payers' that pays for the testing, regardless of the results.

If the person passes, that cost was deemed a

waste. If the person fails, they usually don't get any help... they just get turned down from whatever they were applying for, denied coverage, or fired. All of those results create an interesting conundrum, and pretty much a 'damned if you do vs damned if you don't' type scenario, which seldom exists with alcohol, or any other individualized recreational activity. It is one thing if someone is (or might likely be) hurt because of an intoxicated persons actions. It's quite another what some adult does in the confines of their own home, without endangering anyone else.

However, there has been a big push, the last few years, for testing of every person living off the taxpayers, particularly welfare recipients. In one example, published in the NY Times, 17 April 2012, Lizette Alvarez claimed "Florida State spent \$118,140 drug testing welfare applicants, which was \$45,780 more than they would have spent if they would have just given the welfare to those same 108 applicants that tested positive for drugs."

Clearly, that reporter was better at creative writing than mathematics, as the claim was what is called 'magic math.' It ignorantly

WHO PROFITS (OFF THE 'WAR ON DRUGS'):

supported their agenda, with short sighted and less than honest information. They failed to take into account a whole lot of other necessary factors... but especially the actual monthly allotment those 108 failed applicants would have otherwise been getting.

The NYT math works out to:

$(\$118,140 + \$45,780) / 108 = \$1517.77$ per failed applicant. We all know that isn't a lifetime or annualized, or even quarterly figure... therefore multiply it by 12 months, by number of applicants, equals an annualized savings of \$1,967,029.92 in cash welfare benefits (not including interest, or the other cost factors that might have otherwise been occurred) by Florida State.

Now, the numbers also do not account for what happens to the children (or how many of those 108 applicants failing the drug tests, or the 50 that didn't take the test because they knew they'd fail, had children). Or how those children were otherwise cared for. Or if there was an increase in crime by those failed cases, or any other taxpayer funded costs (such as hospital, jail, police, mental health, court system, foster care, etc.). Now, in Ms. Alvarez's defense, it sounded like she



just bought into the hyperbole (and malformed numbers) of Derek Newton, communications director for the ACLU of Florida, whom she quoted. Shame on them both for promoting obviously flawed and disingenuous short-sighted information!

D) ALCOHOL INDUSTRY – “Pot is safer than alcohol” and “No one has ever died from a marijuana overdose” are two factors the alcohol industry tries to avoid, and market around. Many of the alcohol distributors helps fund, and lobby for, the criminalization of marijuana. They love less competition, especially when the strong arm of the taxpayer funded government is limiting or eliminating their competition.

E) PRIVATE PRISON INDUSTRY – CCA (Corrections Corp. of America) and Cornell

WHO PROFITS (OFF THE 'WAR ON DRUGS'):

Group are the largest private prison companies. They seem to play both ends against the middle, lobbying and donating big bucks to secure and grow their position. They also supply drug-sniffing dogs, and other tools, to help capture those nasty drug abusers. (sorry, sarcastic font missing) It's estimated that over 50% of the current prison population is a direct result of the 'war on drugs.' Consider their own words: "The demand for our facilities and services

could be adversely affected by the relaxation of enforcement efforts, leniency in conviction or parole standards and sentencing practices or through the decriminalization of certain activities that are currently proscribed by our criminal laws. For instance, any changes with respect to drugs and controlled substances or illegal immigration could affect the number of persons arrested, convicted, and sentenced, thereby potentially reducing demand for correctional facilities to house them. Legislation has been proposed in numerous jurisdictions that could lower minimum sentences for some non-violent crimes and make more inmates eligible for early release based on good behavior. Also, sentencing alternatives under consideration could put some offenders on probation with electronic monitoring who would otherwise be incarcerated. Similarly, reductions in crime rates or resources dedicated to prevent and enforce crime could lead to reductions in arrests, convictions and sentences requiring incarceration at correctional facilities." ~ CORRECTIONS CORPORATION OF AMERICA 2010 ANNUAL REPORT



Consider, for a moment, the state AND federal prison population increased 722%

WHO PROFITS (OFF THE 'WAR ON DRUGS'):

between 1970 and 2009! From just 196,429 inmates in 1970, to 1,613,740 on the first day of 2009. Worse, as of 2018, the privatized prisons account for only 8% of the inmates, but still rake in billions each year.

F) ADDICTION RECOVERY INDUSTRY - this doesn't mean there aren't voluntary clients. It's that those 'in power' (of that industry) want government to officially declare drug use a disease; which, then, forces anyone who is deemed to have the disease to receive very specific treatment, from very specific doctors, and then have a third party pay the bill.

G) JUDICIAL SYSTEM - The sad part is that the police, judges, court system, jails, public prison system... and assorted support staff... all add up to a whole lot of good paying jobs. Sadly, the employment numbers, all funded by the taxpayers, are justified by the NUMBER OF PRISONERS... and the system.

Our nation's judicial system not only helps justify a pile of different jobs, and need for larger jails, courts, after release support systems, etc. but also has a direct impact on starting a cycle of watching, and recidivism,

because over 83% are statistically likely to re-offend within the first five years, according to the Department of Justice 2018 study entitled "2018 Update on Prisoner Recidivism: A 9-Year Follow-up Period (2005-2014)".

The results of that 30 state study proves the cycle is perpetuating what the war on drugs helped start.

It's also important to understand that, because many of those 'convicted' of Schedule 1 substances are now lifetime 'felons' with fewer civil rights, there is a higher likelihood of escalating to bigger crimes, just for them to hope to 'stay out' of prison, or just survive and build a family in the future.

Arresting non-violent offenders, that haven't hurt anyone... aren't victimizing others... aren't pushing 'hard' drugs known to ruin or endanger lives, (like meth, PCP, rape drugs, or designer drugs) cost society in more ways than one. Just like the alcohol prohibition's failure, by now it should be abundantly clear that minimum mandatory sentences aren't working, especially for things like cannabis. To further complicate things, these non-

WHO PROFITS (OFF THE 'WAR ON DRUGS'):

violent 'criminals' are stuck in the taxpayer funded system, longer than many burglars, robbers, rapists, and even murders. How's that for real justice?

In 1998, THE BRITISH GOVERNMENT LICENSED A COMPANY TO GROW CANNABIS, and develop a precise and consistent extract for use in clinical trials. England knew that Queen Victoria used cannabis for menstrual cramps, and other ailments, in the 19th century; and saw it used enough throughout the centuries to know it was safe and beneficial.

The oils had mostly been forgotten, or kept buried as some little secret, until the 'push' for a 'smoke-less' and 'legal by-pass' was needed. Then CBD production and scientific research really stepped up as a means to basically 'have the cake and eat it too' for the medical world. It was developed to eliminate the need to 'smoke' (in light of the world's rejection of 'smoking' and equation of smoking to lung cancer, as well as the reality that no one could expect a child to 'start smoking' to get their 'medication'), and also to reduce the THC levels (the markers most governments use to test for marijuana use) while increasing the medicinal value and

benefits.

A PEDIATRIC STUDY INVOLVING CBD OIL AT CHILDREN'S OF ALABAMA, WAS OFFICIALLY AUTHORIZED BY THE ALABAMA LEGISLATURE IN 2014, after millions of people saw the dramatic video of a child suffering from multiple intractable grand mal seizures each day, sometimes multiple in a day, which were significantly quieted by just a few drops of CBD Oil a few times a day. It truly was amazing. The legislation allowing the testing and use for epileptics, known as Carly's Law passed without much delay or debate. Help, at least for some, appeared to be on the way... with many scientists jumping on board filing for funds necessary to conduct a variety of studies. They wanted to officially be on record, as part of the official proof or disproof. Parents, and doctors, were signing up kids with this problem right and left, some even moving from out of state, in hopes of finding a cure for their child.

Then, back in 2015, ANOTHER STUDY ABOUT CBD OIL SOOTHING SEIZURES caught our eye, it was still 'in process.' The claims were miraculous, and were being reported in official journals by 2016. The implications and promise started getting pushed and promoted heavily by the main stream media

WHO PROFITS (OFF THE 'WAR ON DRUGS'):

throughout the 2016 elections. More states approved the use of 'medical marijuana' and a couple more jumped on the 'recreational use' bandwagon (with limits and taxation). And there became much more talk about pushing for some federal legalization to remove the 'Schedule 1' listing on Marijuana altogether.

Early 2018, THE FINDINGS FOR TREATING EPILEPSY WERE PILING UP ACCORDING TO THE MEDIA. Soon Epidiolex's initial study results were released, showing that out of 51 test subjects, 50% saw sustained significantly improved seizure control, 2 remained totally seizure free, and the balance of the others remaining in the study (20) experienced a 32 to 45% reduction in both number and severity of their seizures (depending on the CBD dose). That's huge, and statistically significant by any rational evaluation. However, 9 people dropped out, due to 'either lack of efficacy or side effects,' which was never clarified... and while actually a potential 18% failure rate, the exact reasons would seem to be important (if only to avoid speculation). However, backed by history, over centuries, the pro-marijuana and pro-cbd oil promoters claim that it's physically impossible to over dose on

marijuana or CBD Oil in their natural, normal, forms. And frankly, we've yet to uncover even one example that they are wrong, using an untainted version of either. The reports are that people 'feel sleepy' or lethargic' but not life threatening. With that said, caution is still given, because ANY ADDITIVES could be a potential problem, and few things are 100% purely and solely 'that' thing... there are carriers, flow agents, dilutions, etc. any of which could potentially become a problem,



WHO PROFITS (OFF THE 'WAR ON DRUGS'):



or cause some side effect, depending on the individual and the care given in the manufacturing process.

Further, the study didn't offer any real specifics about the 'types' of seizures, frequency, age, or other factors which could be important to the doctors (and patients) considering their own applications. While a significant breakthrough, and highly promising, for any brain, nerve, physiological issues... there needs to be more numbers and detail in the studies.

It's also key to note, that the dose they used was, in Epidiolex, is 100mg/ml... which means there is 10,000mg in the 100ml bottle (3,000mg in 30ml). This level of potency is a rare find in the consumer market, and would be considered very expensive. (most in the consumer market

are highly cut, at 100, 300, 500, 1000mg PER BOTTLE... requiring people to DO THE MATH on what it actually is per ml).

There are also indications that low doses of CBD Oil, in lower doses might help those suffering from Parkinson's. There are even (finally) some acknowledgements (by government agencies) that CBD+THC can even help certain types of cancer, which is why the FDA HAS APPROVED DRONABINOL AND NABILONE, for the treatment of 'cancer-related side effects.' The reality of science seems extremely promising. However, as a company, our primary focus is on NUTRITION: vitamins, minerals, and nutrients natural to the body, not herbs or botanicals. So any evaluation of the marijuana, THC, or CBD science has little to do with our company, until or unless it became 100% legal under both Federal and State Laws.

AUGUST 1, 2018, THE FIRST CANADIAN PEDIATRIC STUDY OF MIXED THC/CBD CANNABIS OIL FOR CHILDREN with drug-resistant epilepsy shows promise, and is worth watching.

CONCLUSION



Science is interesting. The numbers might be skewed in their reading, or reporting, but ultimately they generally don't lie.

Health and healing are vital to quality of life and longevity, so we decided to dig deeper.

The potential benefits of quality vitamins, minerals, amino acids, enzymes, and modern medicine (such as necessary vaccines, antibiotics, and key drugs) is exactly why most of us are alive today. We know this, cherish that fact.

Learning, inventions, and improvements of knowledge, application, and consistency in process is vital to the future of this world. To our family, friends, and maybe even clients science is absolutely important.

We spent a lot of time wading through the research, studies, and claims... to determine just how much is real, what it *might* actually do, how it actually does, and what is hype (smoke and mirrors, marketing magic, problems with the claims, and outright lies there might be).

ACKNOWLEDGEMENTS

A Special Thanks to my other half, wife, and partner, Mrs. Carly Mercer, for both the patience while I'm researching and writing stuff... and for all the time spent editing, making suggestions, and helping improve the information.

And to Frank McAlister, for his time in looking through the information and helping catch any mistakes, errors, and type-o's.

REFERENCES

Iran J Psychiatry. 2012 Fall; 7(4): 149–156. Chemistry, Metabolism, and Toxicology of Cannabis: Clinical Implications

Priyamvada Sharma, PhD, corresponding author Pratima Murthy, and M.M. Srinivas Bharath

ncbi.nlm.nih.gov/pmc/articles/PMC3570572/

Addiction. 1996 Nov;91(11):1585-614. Cannabis: pharmacology and toxicology in animals and humans. Adams IB, Martin BR.

ncbi.nlm.nih.gov/pubmed/8972919

Prog Neurobiol. 1996 Mar-Apr;48(4-5):275-305. Cannabinoid receptor genes. Onaivi ES, Chakrabarti A, Chaudhuri G.

ncbi.nlm.nih.gov/pubmed/8804112

Prog Neurobiol. 2002 Apr;66(5):307-44.

Endocannabinoids and cannabinoid receptor genetics.

Onaivi ES1, Leonard CM, Ishiguro H, Zhang PW, Lin Z, Akinshola BE, Uhl GR.

ncbi.nlm.nih.gov/pubmed/12015198

Int Rev Neurobiol. 2009;88:335-69. doi: 10.1016/S0074-7742(09)88012-4.

Cannabinoid receptors in brain: pharmacogenetics, neuropharmacology, neurotoxicology, and potential therapeutic applications.

Onaivi ES.

ncbi.nlm.nih.gov/pubmed/19897083

Bull Acad Natl Med. 2014 Mar;198(3):541-56; discussion 556-7. [Tetrahydrocannabinol pharmacokinetics; new synthetic cannabinoids; road safety and cannabis]. [Article in French] Goullé JP, Guerbet M.

ncbi.nlm.nih.gov/pubmed/26427296

1994 epidemiologist James Anthony, then at the National Institute on Drug Abuse, and his colleagues asked more than 8,000 people between the ages of 15 and 64 about their use of marijuana and other drugs.

scientificamerican.com/article/the-truth-about-pot/

REFERENCES

Marijuana and Workplace Safety: An Examination of Urine Drug Tests James W. Price DO, MPH
[tandfonline.com/doi/abs/10.1080/10550887.2014.882729](https://doi.org/10.1080/10550887.2014.882729)

Marijuana Use in the workplace:
datia.org/datia/advocacy/IBH_workplacetesting.pdf
 Cannabidiol Reduces the Anxiety
nature.com/npp/journal/v36/n6/pdf/npp20116a.pdf

Neuropsychopharmacology. 2011 May; 36(6): 1219–1226. Published online 2011 Feb 9. doi:
 10.1038/npp.2011.6 PMCID: PMC3079847 PMID: 21307846

Cannabidiol Reduces the Anxiety Mateus M Bergamaschi, Regina Helena Costa Queiroz, et.al.
ncbi.nlm.nih.gov/pmc/articles/PMC3079847/

Marijuana Use in the workplace:
datia.org/datia/advocacy/IBH_workplacetesting.pdf

Cannabidiol Reduces the Anxiety
nature.com/npp/journal/v36/n6/pdf/npp20116a.pdf

Izzo AA, Borrelli F, Capasso R, Di marzo V, Mechoulam R. Non-psychotropic plant cannabinoids: new
 therapeutic opportunities from an ancient herb. Trends Pharmacol Sci. 2009;30(10):515-27.
biochanvre.ch/info/en/IMG/pdf/Non-Psychoactive-Cannabinoids.pdf

Mechoulam R. Plant cannabinoids: a neglected pharmacological treasure trove. Br J Pharmacol.
 2005;146(7):913-5. Russo EB. Taming THC: potential cannabis synergy and phytocannabinoid-
 terpenoid entourage effects. Br J Pharmacol. 2011;163(7):1344-64.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3165946/pdf/bph0163-1344.pdf>

VA and Marijuana – What Veterans need to know
<https://www.publichealth.va.gov/marijuana.asp>

VA Clears The Air On Doctors Talking To Veterans About Marijuana Use
<https://www.npr.org/sections/health-shots/2018/01/09/576577596/va-clears-the-air-on-doctors-talking-to-veterans-about-marijuana-use>