

MEDICAL CANNABIS (CBD OIL)

THE BENEFITS ON MULTIPLE CONDITIONS

Barry's Case

- Solitary Glioma – Diagnosed 2013
- Surgical resection.
- Six months later recurrence – Radiation
- Six months later symptoms again. Doctors gave him 2-3 months to live.
- Called me 12 months later – asymptomatic and feeling well.
- Treatment? – vegetarian diet, vitamin C, and CBD oil
- Scans not only showed that his cancer had completely stopped growing. They showed that the cancer had actually shrunk!
- What was going on?

Cannabis

- Hemp and marijuana
- Cannabinols (cannabinoids) - Cannabis has more than 100 different cannabinoids. But two of them stand out: THC (tetrahydrocannabinol) and CBD (cannabidiol).
- Hemp contains very little THC - less than 0.3%. Marijuana can contain anywhere from 5-30%. Both contain similar amounts of CBD
- Hemp and hemp extracts, unlike marijuana, are legal in all 51 states.
- Other than the fact that hemp has almost no THC the two plants are the same. All of the other cannabinoids and terpenes are present in both plants.

Endocannabinols

- We make our own cannabinoids - endocannabinols.
- Our cells have their own endocannabinol receptors
- There are more cannabinol receptors in the human body than any other receptor system, found in large amounts in the peripheral nervous system, the internal organs, the skin, the muscles, the ligaments, and in the immune system.
- In this sense CBD works much more like a hormone than a drug.
- The following diseases show alterations in the endocannabinol system: Multiple sclerosis and spinal cord injury, neuropathic pain, cancer, atherosclerosis, stroke, diabetes, myocardial infarction, hypertension, glaucoma, obesity, metabolic syndrome, and osteoporosis.
- THC and CBD act on these receptors to decrease inflammation, pain, and tension and anxiety, stimulate the immune system and increase energy levels.

Cannabinols in Cancer

- Cancers require inflammation in order to survive so they activate the NF-kappa Beta pathway that causes inflammation. THC and CBD decrease inflammation by deactivating the NF-kB pathway. And in this way decreases the ability for cancer cells to grow and spread.
- THC and CBD stimulate the immune system.
- Angiogenesis is the process that cells use to form new blood vessels and improve blood flow. Since cancer cells don't die and are constantly growing they have an ever increasing need for more blood. So to provide the extra blood flow cancer cells can produce pro-angiogenic factors that act to promote angiogenesis. THC and CBD act as an angiogenesis inhibitors by preventing cancer cells from producing these pro-angiogenic factors.

Cannabinols and Cancer

- Both THC and CBD have a direct anti-cancer effect on tumors. By interacting with the cannabinol receptors on tumor cells they inhibit growth and promote apoptosis.
- CBD also has a direct anti-cancer action that has nothing to do with the receptors.
- One study discovered that CBD directly impaired the migration and invasion of glioma cancer cells in a dose dependent way.
- And when they blocked the CBD receptors they saw the same effect. The authors concluded, "These results reinforce the evidence of anti-tumor properties of CBD, demonstrating its ability to limit tumor invasion..."

Cannabinols and Cancer

- Other studies show that both THC and CBD have anti-cancer activity in lung cancer, hormonal cancers, melanoma, leukemia, colon cancer, thyroid cancer, prostate cancer, and both estrogen positive and estrogen negative breast cancers.
- In all of these cancers CBD weakens cancer cells making them more susceptible to chemo and radiation and decreases their ability to grow, invade, and metastasize.
- Additionally, everyone of these studies shows that in the same doses used neither THC or CBD does any harm to healthy cells.

Cannabinols and Cancer

- One review article sums it up this way, "Cannabinoids possess anti-proliferative and pro-apoptotic effects, and they are known to interfere with tumor neo-vascularization, cancer cell migration, adhesion, invasion and metastasization."
- In combination with their anti-cancer effects cannabiniols also increase appetite, decrease stress, improve immune activity, and decrease insomnia making cannabiniols ideal for treating cancer.

Cannabinol/Cancer Refs

- [Vaccani A](#), [Massi P](#), et al. Cannabidiol inhibits human glioma cell migration through a cannabinoid receptor-independent mechanism. [Br J Pharmacol](#). 2005 Apr;144(8):1032-6.
- [Paola Massi](#), [Marta Solinas](#), et al. Cannabidiol as potential anticancer drug. [Br J Clin Pharmacol](#). 2013 Feb; 75(2): 303–312.

Other Diseases/Conditions

- Crohn's Disease
- Chronic Pain
- Chronic anxiety
- Chronic insomnia
- Seizures
- Parkinson's
- Anti-depressant
- Regulates blood pressure.
- Osteoporosis.
- Spasticity
- Migraines
- Amplifies antibiotic effectiveness against MRSA.
- Anti-emetic
- Anti-inflammatory
- Hyperemesis gravidum
- Multiple sclerosis,
- Huntington's disease
- Tourette's syndrome
- Glaucoma
- Autism

[Shohami E, Horowitz M.](#), Cannabinoids in Health and Disease. [J Basic Clin Physiol Pharmacol.](#) 2016 May 1;27(3):175-9.

Side Effects

- THC: anti-motivational syndrome and cognitive impairment
- CBD: none.

THC Facts

- THC is illegal in most states.
- Completely unregulated unless purchased at state sanctioned stores.
- 3 Licenses: growing, production, and sales.
- Three strains of cannabis: Indica, Sativa, and mixed.
- Indica – sedative, “Stoned”
- Sativa – mood elevation, energized, “High”
- THC psychoactive properties are attenuated with CBD
- Getting the right strain and THC/CBD ratio.
- Kanna Dispensary – www.kannareno.com

Terpines

- Terpenes are biologically active molecules found in all plants. In hemp and marijuana it is the terpenes that give it a very special aroma.
- Terpenes are because the effectiveness of THC and CBD is enhanced when it is taken along with all of the various terpenes found in the plant. This is what is called the “Entourage Effect”.
- If the terpenes are not preserved in the final CBD product, it will not be nearly as effective.
- Depending on how the bulk oil is processed many or most of the terpenes may be lost. And unless the manufacturer is regularly checking each batch of THC/CBD product with HPLC to determine the final terpene content, you can't be sure you are getting an effective product.

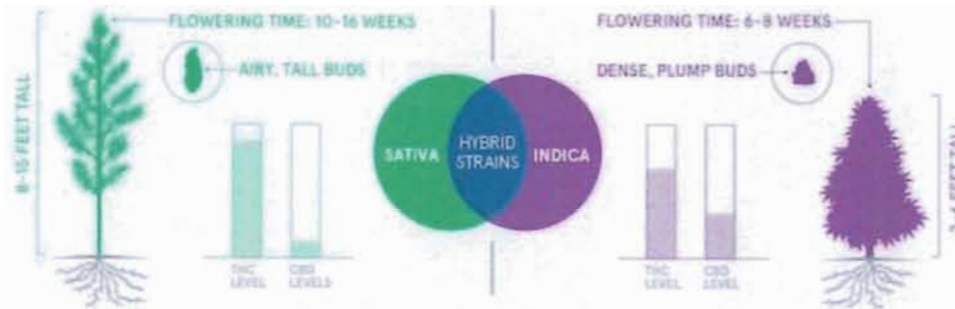
CANNABIS IS CLASSIFIED INTO THREE SPECIES: **SATIVA**, **INDICA**, OR **RUDERALIS**.

The cannabis we love to smoke is either indica, sativa, or usually a hybrid of the two.



RUDERALIS is a short, hearty, wild strain with fewer leaves and low THC content. It is not used for consuming but is sometimes crossbred with indicas or sativas to produce an "autoflowering" hybrid—meaning it will produce flowers (buds) based on age rather than light cycles like sativas or indicas.

GROWING



EFFECTS



REFS

- [Shohami E](#), [Horowitz M.](#), Cannabinoids in Health and Disease. [J Basic Clin Physiol Pharmacol.](#) 2016 May 1;27(3):175-9.

CBD

- CBD is legal in every state.
- Made from bulk hemp oil which is very nasty tasting.
- Bulk oil must be processed into a final product that contains a high amount of CBD and terpenes and a low levels of tars and other non-essential substances.
- Hemp oil products are utterly and completely unregulated!. Anyone with the proper extraction equipment can buy bulk hemp oil and make a CBD product out of it.

Problems with CBD

- Contamination. The best hemp oil comes from two European suppliers. This is because the integrity of the product is regulated in Europe. But the Chinese are also getting into the business. And no one wants to buy Chinese hemp oil because of possible contamination issues. So Chinese producers figured out a way to get around this. Instead of directly shipping their hemp oil to the United States, they first send it to Europe. And then they have it shipped from Europe to the US masquerading as a European product.
- So while many manufacturers of CBD products in the US think they are getting regulated, contaminant free European hemp oil, they may not be.
- Of course if they had the capability of analyzing the product for toxins after they bought it they could detect the problem. Unfortunately that kind of very technical equipment is expensive and most of them don't check.
- But this is not the only source of possible chemical contamination in CBD products.

Problems with CBD

- There are no regulations around how manufacturers process the bulk oil into the final product.
- Different manufacturers use different methods. Most keep their methods secret for proprietary reasons. The problem is that many manufacturers use toxic chemicals in their processing.
- When you buy their CBD product you have no idea what level of chemical residue may be in it along with the CBD.

Problems with CBD

- Final quality of a CBD product. Unless the manufacturer checks each batch of the final CBD oil on an HPLC (high performance liquid chromatography) analyzer he really has no idea how much CBD is actually in the product he is selling.
- Virtually none of the CBD manufacturers own or use an HPLC. I know. I have called them and asked for their specs. So while they maintain that they are selling a product that has such and such an amount of CBD in it, in actuality they don't know for sure.
- And the CBD content of the oil is not the only thing that has to be considered. Without HPLC testing it is impossible to know the terpene content of the product.

Absorption

- The last problem has to do with absorption. Only about 5-8% of the CBD in the average product for sale is ever absorbed.
- So you could easily be buying an oil that has a high content of CBD but very little of it is actually getting absorbed.
- I have yet to find a producer of a CBD product that has taken the time to find out just how much of the CBD in his product gets absorbed.
- That's why I recommend nano technology.

Miscellaneous

- Shelf life = 2 years
- Pharmacokinetics – quick onset with vaping and smoking. Effects last about four hours.
- Pharmacokinetics – slow onset with oral. Effects last about eight hours.
- One patient states no mental side effects from suppository.
- Absorption – 80% with vaping and smoking. 8% oral. 80% oral nano.
- Dosing - 25mg CBD per day for most things. Cancer is higher.

Case Examples

- Xanax addiction – young woman on Xanax for insomnia and anxiety for years. Completely off Xanax in two weeks after taking nano CBD.
- Seizure – 7 year girl with new onset grand mal seizures. Agranulocytosis after medication. Seizures completely gone with nano CBD, magnesium, and off sugar.
- Crohn's Disease – 72 y/o man with Crohn's for 30 years. Complet remission within five days of oral cannabis indica.
- Migraines – two very difficult cases of chronic migraines. Headaches dramatically reduced with oral cannabis.

Case Examples

- Diarrhea – several cases including some from chemotherapy resolving well from both cannabis and nano CBD.
- Nausea/anorexia – several cases resolved nicely with nano CBD and cannabis.
- Parkinson's – three patients showed significant improvement in tremors and walking after adding in nano CBD or cannabis.
- Autism – one 6 y/o child began speaking after rubbing nano CBD gel on the gums.
- Cancer – the combination of IPT chemotherapy, nano CBD or cannabis, and high dose melatonin is astounding!

At **Doctor Badanek's** Office, we handle and disburse only the finest CBD Oil produced in a pharmaceutical lab which produces industrial grade CBD oil. The lab is registered with the **Colorado Department of Agriculture**. All CBD oil production comes with a **Certificate of Analysis** to validate the **percentage and quality of the product**.