

ALTERNATIVE AND NATURAL MEDICINE IN THE RESEARCH AND DEEP HEALING OF CANNABINOIDS (CBD)

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All mammals have an endocannabinoid system (ECS). The ECS is involved in initiating a host of physiological and psychological changes needed to adjust to ever-changing internal and external environments as well as other functions. This is true from the very beginning of life when ECS signaling determines if a fertilized egg will implant in the uterine wall or not. Throughout our life the ECS produces nurturing responses to injuries and inflammations. It is involved in protective mechanisms against numerous cancers, neurological diseases and nerve damage and it may mitigate changes associated with aging.

The scientific identification of the endocannabinoid system is a relatively recent development that stemmed from research into the cannabis plant, for which it is named. Since then, about ten new studies have been published every month examining the impact of the ECS, its range and complexity. Presumably this is a reflection of the excitement and hope this research has generated in the medical research community, physicians, patients and caregivers.

The ECS is a biological regulatory mechanism that operates much like a lock and key. Understanding the ECS is a critical task if we are to more effectively manage diseases, especially chronic, debilitating diseases for which there is no orthodox cure. For instance, if properly activated, the ECS is capable of suppressing numerous cancers and may be protective against Alzheimer's disease.

In addition, to its preventive and protective mechanisms, the ECS balances and strengthens our nervous and immune systems, initiates pain control and calms inflammation. The ECS initiates neurogenesis (the production of new nerve cells) which is essential to recovery from brain damage, and crucial to protecting nerve cells and enhancing memory function. The ECS increases our ability to try out new perspectives and experiences. When we try new things, we literally change our brain functions for the better in a process called neuro-plasticity. Evidence suggests the ECS may be involved in generating subtle but therapeutic shifts in the ways we perceive the world, relate to our internal landscape, think and feel about ourselves, and interact with each other.

The role of the ECS in neurogenesis, neuroplasticity, learning, and opening us to new experiences demonstrates connections between our frame of mind, the development of illness or the expansion of health and well-being. For example, a frame of mind that frequently leads to guilt or shame produces specific negative changes that impact our bodies' ability to defend against pathogens. On the other hand, many cannabis using patients notice the positive health effects of open mindedness, creativity, humor, laughter, bliss, acceptance, tolerance, gratitude, and forgiveness, despite an often – difficult healing process.

These shifts in frame of mind can be induced by endocannabinoids (cannabinoids produced by the body itself) or by cannabinoids extracted from plants or synthesized in a laboratory. Either way, the ECS can be activated to help us move beyond limiting ways of being and behaving based on past experiences. The ECS can be activated to support movement towards whatever could produce enhanced health and vitality now.

Cannabinoid Receptors

Large numbers of cannabinoid receptors are embedded in specific membranes throughout the human body. These receptors can be activated in three ways: by release of the body's own cannabinoids (for example, anandamide), through the introduction of plant-based cannabinoids such as cannabis, or through manufactured cannabinoids such as Dronabinol.

The two most common types of cannabinoid receptors are CB1 and the CB2 receptors. Scientists suspect there are three more endocannabinoid receptors whose locations and functions will be more fully understood after more research. For the time being, these other receptors are referred to as non-CB1 and non-CB2.

Cannabis

Numerous good books have been written on the history of cannabis and its place among the people and cultures of the world, so I will keep this section brief and relevant to healing. There are hundreds of varieties of cannabis with similar appearance and characteristics. With the exceptions of Antarctica, the species grows on every continent.

For our purposes, two basic distinctions are of importance. First, the name hemp is used to indicate extremely low or non-psychoactive cannabis species. And, while hemp plants are a good source of nutrition (e.g. essential fatty acids); the

mechanical property of hempseed oil is limited to some mild anti-inflammatory properties. Hemp is a legal crop in numerous countries and used for food, drink, fiber, oil, paper, building materials, erosion control, fuel, biodegradable plastics, and a multitude of other uses.

Secondly, medicinal cannabis species consist of two basic species, cannabis sativa and cannabis indica. Both are psychoactive and both contain the cannabinoids required to engage the endocannabinoid system for specific therapeutic purposes. These two strains look different and contain different ratios of the primary cannabinoids, which is relevant when selecting a strain for specific therapeutic purposes.

Indica plants tend to be short and stinky, with wider leaves than sativas, which usually grow longer, higher and display a finer leaf structure. More important however, indicas and sativas produce different THC:CBD/CBN ratios. These ratios are important, because the ratio determines the degree to which the balancing properties of the whole plant's constituents are additive or cancel each other out.

Sativa: Higher THC to Lower CBD/CBN Ratio

Generally stimulating, energizing, uplifting
Usually more mental/emotional
Usually more extrovert
Best for daytime use
Increases alertness
Consider with depression
Pain relief, muscle relaxant
THC binds both CB1 and CB2 receptors

Indica: Lower THC to Higher CBD/CBN Ratio

Generally sedating, relaxing, grounding
Generally more physical
Usually more introvert
Better after work is done, bedtime
Sleeping aid
Consider with anxiety
Pain relief, muscle relaxant
CBD has a greater affinity for CB2

Many cannabis using patients use the plant not only as medicine, but as a means to seek a deeper and longer lasting healing. The cannabis induced "high" is employed to explore our frame of mind associated with illness and disease, to reach a deeper understanding, gently accept oneself and initiate nurturing changes that support health and healing and desired levels of energy.

A carefully balanced and finely tuned body and mind can more easily surpass ordinary states of consciousness and open doors to spiritual dimensions of reality. Ascetics of India and modern urban shamans alike consider this dance of expanding consciousness between plant and human a literal infusion of spirit. The ingestion, topical application or inhalation of marijuana is employed as a tool to learn and explore, and to seek knowledge, insights and spiritual revelations about the self in an ever-expanding and mysterious universe. And it is precisely

this infusion of spirit with its vibrancy, aliveness and enthusiasm that ultimately allows for a renewed sense of health and well-being.

In one sense, the cannabis-using patient reaching for deeper healing is not dissimilar to who use the plant to access realms that are beyond the comprehension and imagination of ordinary consciousness. Those who use the plant as a spiritual practice echo a tradition which dates back to ancient times. Some of the wandering yogis of India and Nepal and the Sadhus – ascetics who have dedicated their life to explore the ineffable presence of God – use cannabis as a means to this end. To Rastafarians, “the herb is the key to new understanding of the self, the universe, and God. It is the vehicle to cosmic consciousness.” Ancient Scythians used cannabis to produce trance states, divination, delight and joy. According to the Bible, God instructs Moses to make holy anointing oil containing keneh bosem (cannabis) to ...anoint Aaron and his sons, sanctifying them as priests to Me.” The Egyptian Ebers papyrus, which documents medical practices dating from 3400 Bs describes the use of cannabis ground in honey as a remedy for vaginal illness.

Even though cannabis has more proven therapeutic applications than any other plant in the world, working with cannabis is by no means a panacea. However, combining an informed and responsible use of cannabis by engaging mind-body medicine, we open a door to a new and potent synergy of healing that can take our healing journey to new depths, far beyond temporary relief or mere cessation of symptoms. We might discover places of profound understanding, combined with a deep sense of empathy. Perhaps it will show up as a newly-found freedom, rooted in responsibility without blame. The journey might reveal a love emerging from an ancient hatred, or the lifting of a humiliating shame that was crushing our spirit. Or we may surprise ourselves by the emergence of a tender intimacy that transcends the lingering sensation of worthlessness like dew in the morning fog.

Is Cannabis Safe?

Who Should Not Use Cannabis?

As with any medicine that affects the mind and the body, cannabis evokes numerous concerns and questions worthy of examination. Chief among them is the potential for adverse effects. Does the use of marijuana lead to addiction? How does the use of the plant affect the development of adolescents, or the developing fetus in pregnant women? Concerns about fertility are raised. The

smoking of plant material and its effect on the lungs are another commonly expressed concern. What about the plants impact on the heart, or the development of cancer? Some studies have suggested that marijuana may be implicated as a co-factor in developing schizophrenia, or cause traffic accidents from irresponsible use. Could smoking pot encourage use of other illegal and/or dangerous “recreational” drugs (an idea known as The Gateway Theory)? Lastly, is it possible to overdose on cannabis?

According to several US government sources, there were zero deaths due to the exclusive use of cannabis in the periods studied which range from January, 1997 through June, 2005. (Deaths in which cannabis was one of several drugs used are not counted here). In contrast, recent CDC estimates suggest that on average, tobacco (particularly cigarette smoking) claimed 110,750 lives per year from 2000 to 2004. The average number of alcohol-related fatalities per year was estimated at 75,766 in 2001.

Commonly noted effects of cannabis include euphoria, relaxation, intensification of sensory experiences, infectious laughter and talkativeness, increased appetite, and feeling “stoned”. Adverse effects include reduced attention span, red sclera (reddening of the normally white part of the eyes), dry mouth, and decreased cognitive and motor skills. Other rare side-effects, more common when ingested or when used at higher than the subjective therapeutic dose, include ataxis (unsteady gait), aphasia, (inability to speak clearly), unusual perceptions of all senses, including hallucinations, anxiety, (though this can be addressed by reassurance), slight increase in heart rate, subtle shifts in blood pressure, depending on the position of the body, and panic (moderated by reassurance) upon first ever use.

In the context of addiction, both opponents and proponents of medical marijuana have numerous studies to support their arguments. However, one distinction is usually agreed upon. If dependency occurs, it is an addiction in psychological terms rather than in the physical realm, as is the case with many other substances, such as tobacco, alcohol or heroin. The large numbers of people enrolled in drug treatment centers is often cited to substantiate claims that the plant is psychologically addictive. This overlooks the reality that many court judges do not believe marijuana users should go to jail, but as they are bound to uphold present laws, they are left with no other option but to mandate drug treatment instead of jail or prison time.

Compared to pharmaceuticals, some of which have a more significant addiction potential, cannabis carries a considerably reduced risk of adverse side-effects

(including death). An FDA report compared marijuana to 17 common FDA-approved pharmaceutical drugs used to treat similar symptoms and conditions. Their findings make a compelling argument for medical marijuana. Between 1997 and 2005, no deaths were attributed to the exclusive use of cannabis while the FDA recorded 10,008 deaths due to the 17 FDA-approved pharmaceutical drugs in the study.

If you are concerned about developing a dependence on cannabis, you may reduce this potential risk by infusing mindfulness into your process of healing and/or using raw preparations of cannabis which have little or no psychoactive effect.

Walter had sexual performance anxiety. The use of cannabis reduced his anxiety and otherwise enhanced his sensual experience. Rather than becoming dependent on the use of the planet each time he wished to engage in sexual activity, he used the cannabis-induced state of mind to explore the deeper causes for his anxiety and took corrective action, which eventually cured his anxiety and eliminated his need for cannabis.

When it comes to fertility, to the developing fetus or to the still physically-developing adolescent, the use of any mind-body altering substance is cause for concern. As before, various studies are cited as evidence by those on both sides of this issue. No long term studies examining the exclusive use of cannabis on fertility, the fetus and adolescents have been conducted. Instead, people enrolled in most studies were exposed to other substances, thus complicating the overall picture.

However, a study conducted at Duke University which collected subjective observational data from New Zealand residents over a period of about 38 years concluded that while cannabis use by adults has no effect on intelligence, “cannabis dependency” in adolescents (defined by the authors as continued use despite major health, social, and/or legal problems related to its use) may contribute to reduced IQ test scores later in life. The study has limitations: data was described subjectively, the study has a small sample size (17% or 153 people fit the authors’ dependency definition), and only some factors that may alter IQ were considered in the analysis. Still, no other study to date has examined the impact of adolescent use of cannabis on intelligence measured over time. Until more is known, it is advisable to assume a possible correlation.

Whenever plant matter is burned, smoke is released, and with it potentially harmful particles. However, the largest population-based case-controlled study ever conducted of cannabis-only use yielded somewhat counter-intuitive results.

For the 2,252 people studied in a Los Angeles, California study, smoking (only) cannabis was found to be mildly lung-protective, and was not associated with an increased risk of lung cancer.

Cannabis oil produces therapeutic effects in patients with chronic obstructive pulmonary disease (a serious lung disorder) and asthma. To minimize any potential risk of negative consequences to one's lungs, some people use vaporizers to inhale cannabis rather than smoking cannabis wrapped in paper. Use of a vaporizer eliminates the inhalation of carbon compounds from burned paper. An infused oil or alcohol-based tincture can also be used to address symptoms related to lung diseases.

Endocannabinoid receptors are present in the heart, and thus are involved in regulating heart function. THC can increase one's heart rate, but not to a dangerous extent. Furthermore, numerous studies have shown that THC, CBD, and CBN have potentially potent cardio-protective properties. And in the context of cancer, cannabis constituents have demonstrated remarkable abilities to produce apoptosis (cancer cell death) in a great variety of cancer manifestations. Observational studies have concluded that ingesting cannabis as an adolescent may increase one's risk of developing schizophrenia later in life. While cannabis is not itself a causal factor for schizophrenia, in some instances it may be a co-factor. Based on the current evidence, it would be prudent for adolescents or young adults with a known family history of psychosis or schizophrenia to stay away from cannabis or any other mind-altering substance, especially speed-based drugs such as cocaine or methamphetamines.

The controversial gateway theory suggests that adolescents who experiment with cannabis are more likely to subsequently try and become addicted to, other illicit drugs. While the gateway theory has never attempted to address therapeutic uses of legally obtained medicine, the suggestion that even short-term cannabis use could lead to addiction to other drugs still lingers in many peoples' minds. In fact, a recent study of over 4,000 cannabis smokers concluded that cannabis use leads to a decrease in the use of alcohol, tobacco, and hard drugs.

Can cannabis kill you? A laboratory study conducted in 1973 reported the median lethal dose of oral THC in rats as 800-1900 mg/kg, depending on the sex and genetic strain of the animal. If body weight is used as the sole criteria, this study suggests that 200 grams of herb per kilogram of body weight is required to approach a lethal dose in humans. Accordingly, a person weighing 70 kg, or 154 lbs, would need to consume 14 kg of herb to approach a fatal dose. A 2004 study

was much more conservative, and stated 628 kg of cannabis would have to be smoked in 15 minutes to induce a lethal effect.

Another area of concern for some is the possibility that external toxins or biological pathogens could be present of pesticides on any consumed plant material may increase the body's toxic load, and can contribute in numerous and unpredictable ways to ill health, but can easily be eliminated by purchasing or growing organic cannabis. Aspergillus is a mold that grows on many agricultural products throughout the world and is a common contaminant of bread, potatoes and peanuts. Because cannabis is not regulated, growers do not routinely test for aspergillus nor report concentration amounts as is required for say, peanut growers. Patients with an already depressed immune system could be particularly vulnerable to any negative effects of aspergillus fungus-contaminated cannabis. Use caution to determine the presence of the fungus on any plant product before consumption. Many cannabis patients believe that heating cannabis at temperatures of 300 degrees F for a period of 5 minutes will kill the pathogen but I have not been able to find any studies to verify this suggestion.

Our office handles only the finest certified organic CBD oil manufactured by a certified lab in Colorado. We have a Certificate of Analysis with each lot of CBD oil produced for our office. Consumers beware of the BAD sales of CBD oil by bad companies and marketing schemes. Many times you are NOT getting what you paid for. Always ask for and see the Certificate of Analysis before purchasing CBD oil.

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