

POTENTIAL BENEFITS OF CANNABINOIDS

"My professional clinical opinion is that there absolutely is a role for Formula30A CBD in clinical medicine. The myriad of benefits conferred by CBD are irrefutable. Given the systemic influence of the endocannabinoid system (as well as the effects of CBD), I am optimistic about further studies to assess for clinical efficacy in other chronically ill patient populations."

- DR. CORY RICE, D.O.

Anxiolytic

- Generalized Anxiety Disorder
- Post-Traumatic Stress Disorder
- Panic Disorder

Chronic Pain

- Neuropathic Pain
- Inflammation Pain
- Cancer-Related Pain

Anti-Seizure

- Lennox-Gastaut Syndrome
- Dravet Syndrome
- Epilepsy

Brain Health

- Alzheimer's Disease
- Parkinson's Disease
- Insomnia

Heart Health

- Coronary Heart Disease
- High Blood Pressure
- Stroke

Reproductive Health

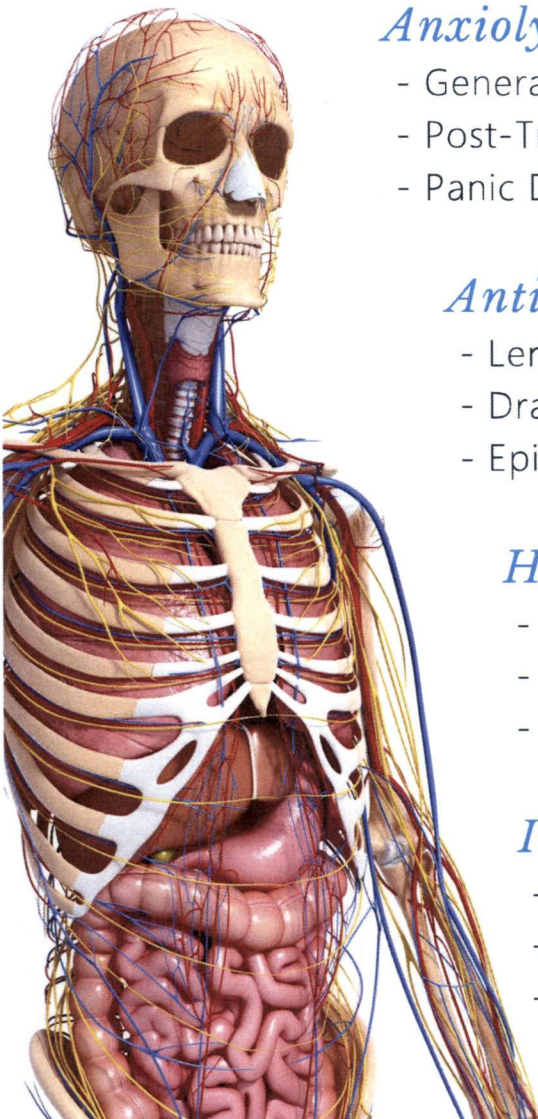
- Endometriosis
- Dysmenorrhea
- Adenomyosis

Injury Recovery

- Traumatic Brain Injury
- Exercise-Induced Injury
- Muscle Tension Relief

Anti-Inflammatory

- Rheumatoid Arthritis
- Vascular Inflammation
- Inflammatory Bowel Disease



CBD Treatment in Medical Practice

Anxiolytic Properties

Generalized anxiety disorder, as well as other anxiety disorders such as OCD, social anxiety, and panic attacks, affects millions of people and has increased greatly since the start of the COVID-19 pandemic. The problem of anxiety is only growing, with prevalence at an all-time high. It is no surprise that prescription anxiolytics and anti-depressants represent a significant expenditure of the global health care dollar. Numerous studies (and the number is rapidly increasing) demonstrate a clear and significant benefit in neuropsychiatric disorders stemming from the diverse central nervous system actions of Cannabidiol (CBD). With regard to anxiety, studies show benefit in general anxiety disorder, social anxiety disorder, panic disorder, obsessive-compulsive disorder, and post-traumatic stress disorder. One such study from the University of Colorado demonstrated decreased anxiety scores within the first month of use in nearly 80% of the participants.

Chronic Pain Relief

The business of pain is a multi-billion dollar a year venture. From over-the-counter remedies, to prescription narcotics, we spend a great deal of time and money to help alleviate pain. In that quest we have created a crisis for which the medical community and lawmakers are trying to find a solution. In medical publications, there is a growing acceptance that the development of medical interventions that work ubiquitously (or under most circumstances) for the majority of common chronic conditions is exceptionally difficult and all too often has proved to be fruitless. The endocannabinoid system (ECS), however, holds tremendous value and potential in almost every system of the human body. Understanding the ECS can be a critical component in managing basic and complex pain syndromes. Studies have demonstrated that CBD may help reduce chronic pain by impacting endocannabinoid receptor activity, reducing inflammation, and interacting with neurotransmitters.

Treatment for Seizures

Seizures are surges of electrical activity in the brain that occur at inappropriate times. Underlying conditions, such as epilepsy, can cause seizures. About 30% of people with epilepsy have difficulty controlling their symptoms using traditional methods. Some experts think CBD may be particularly beneficial for two rare forms of epilepsy, Lennox-Gastaut syndrome, and Dravet syndrome. The syndromes typically appear in childhood, resist treatment, and cause severe symptoms, including seizures. Some doctors prescribe the FDA-approved CBD isolate Epidiolex to treat the seizures that these rare forms of epilepsy cause.

Alzheimer's Disease

In recent studies, CBD has been shown to reduce or remove the impact of inflammation, oxygen buildup, and brain cell decline in patients suffering from Alzheimer's. Patients' brain cells often show a path of rapid decline and destruction, with the inflammatory response (when the brain's immune cells fail to clear disorienting blockages) as a core cause of Alzheimer's symptoms. When inflammation happens in the brain, oxygen is released as a reactive, stress-induced component. The greater the inflammation, the greater the negative impact on important brain functions such as memory. CBD is an antioxidant, which helps reduce the negative impact on brain function caused by oxygen stress. In clinical trials, CBD has shown the ability to reverse and even prevent the development of Alzheimer's negative impact. A 2011 study by Australian researchers Tim Karl and Carl Group found that CBD promotes the growth and development of brain cells, which were shown to reduce the decline of memory and other brain functions.

Parkinson's Disease

Parkinson's is a chronic progressive disease of the nervous system chiefly affecting middle-aged and elderly people. Parkinson's is linked to decreased dopamine production and marked by tremor, muscular rigidity, and slow, imprecise movement. Digestive imbalance may also play a role in the progression of Parkinson's and the severity of symptoms. Cannabinoids such as CBD have shown to contain effective brain protectors, antioxidants and anti-inflammatory properties which can be beneficial for managing Parkinson's disease. Research has shown that CBD can be an effective anti-inflammatory agent, reduce anxiety, reduce motor symptoms (tremor, rigidity, bradykinesia) and maintain circadian (sleep) rhythms.

Insomnia

Sleep is far more important a factor in life and health span than we previously realized. Not only does it decrease our inflammation and risk of metabolic disorders, it also is the time for healing of the brain. Increasing one's deep and REM sleep is a great strategy to reduce the risk of Alzheimer's disease. Conversely, losing sleep can affect your critical thinking, reaction time, energy, and emotional stability. Lack of quality sleep correlates with increased mental health symptoms and pain. Improving sleep improves overall health and well-being. The long-term negative side effects of therapeutic hypnotics and decrease in effectiveness over time in this class of medications is a difficult issue for patients with chronic insomnia. The endocannabinoid system (ECS) plays a critical role in circadian components of sleep-wake cycling. By targeting the ECS, studies have demonstrated improvements in decreased sleep onset latency, decreased waking after sleep onset, and increased slow-wave sleep. Long-term studies of sleep quality assessed CBD effects using a common self-report instrument and found a modest improvement in sleep, and more patients with improved sleep compared to poorer sleep.

Protecting the Heart

Heart attacks and strokes are still leading killers of Americans, over cancer and other causes, yet many people do not even consider the notion that they may have heart disease. Any combination of a large set of risk factors increases the chance of having a heart attack (or stroke) by causing inflammation in the artery wall. Inflammation in the artery wall increases the risk of plaque formation and rupture. Ruptured plaque leads to the clot that causes the heart attack (or stroke). CBD has been shown to help reduce vascular inflammation and increase blood flow. In 2003, three scientists identified a link between heart disease, strokes, and cannabinoids, finding that "cannabinoids are found to have particular applications as neuroprotectants, for example in limiting neurological damage following ischemic insults, such as stroke and trauma, or in the treatment of neurodegenerative disease, such as Alzheimer's disease, Parkinson's disease and HIV dementia."

Female Reproductive Health

A female's pelvic pain is mostly unique and distinct from their male counterparts; it is with, and without, cyclicity and may, or may not be, correlated with menses. Nature's narcotics (opium, laudanum), anti-inflammatories (salicylates like willow and poplar bark), and intoxicants (fruit and grain fermentation to ethanol, mushrooms, cocaine, cannabis) were often explored, consumed, and abused in order to obtain some level of relief from what ailed. The primary pain maladies of the female pelvis are, dysmenorrhea, endometriosis, and adenomyosis, and historically, cannabis has been a favorite choice for the specific dimorphic discomforts of a woman's pelvis. CB receptors are found throughout the female pelvis, including the uterus/endometrium, fallopian tubes, and ovaries. It was shown that there are CB-1 receptors within the nerve cells of ectopic endometrial implants (endometriosis and adenomyosis), and the activation of these receptors with CB-1 receptor agonists reduces pain. Likewise, it was shown that the synthetic cannabinoid, WIN55, 212-2 (hundred-fold activity of natural cannabinoids) stopped the growth of in vitro endometrial tissue and increased anti-proliferation effect in vivo (murine) endometrial cells. This shows that exogenous cannabinoids could be clinically relevant in treating abnormal uterine bleeding, endometriosis, or adenomyosis, and that they, in this study, possibly exhibited an effect similar to progesterone.

Recovering from Injuries

Traumatic brain injury (TBI) is one of the leading causes of death and disability worldwide in individuals under the age of 45, with over 5.3 million Americans currently struggling with TBI disabilities. There are multiple causes from car accidents, falls, contact sport, to gunshot and stab wounds. The effects can last a few days or the rest of a person's life and include impairments related to thinking or memory, movement, sensation, vision and hearing along with emotional functioning (e.g., personality changes, depression, anxiety etc.). Two-thirds of TBI patients are put on anti-anxiety medications. Others are put on anti-depressants, anticonvulsants, muscle relaxants and/or stimulants. All of those listed come with a hefty side effect profile. Many times, the side effects are worse than the hoped-for cure. In 1998, the Proceeding of the National Academy of Sciences published a groundbreaking report on the neuroprotective properties of cannabidiol (CBD) and tetrahydrocannabinol (THC). A 2011 article in the British Journal of Pharmacology, co-authored by Israeli