

Leafreport Clinician Reports on the Newest Promising Research on CBD

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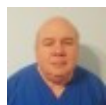
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CBD and COVID-19 New Research, CBD in Treatment-Resistant Epilepsy & CBD and dental health



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New Research: CBD May Heal Lung Damage Caused by COVID-19

As of late July 2020, COVID-19 has taken more than 660,000 lives globally. With no successful vaccine and no effective treatment for the virus yet, the cases, and death toll continue to rise. Researchers are looking for treatment options around the clock, and one

interesting possibility has popped up: CBD. CBD has numerous properties that make it a possible candidate for COVID-19 treatment, including its anti-inflammatory and antiviral actions. The absence of CBD's abuse potential and the fact that it is non-intoxicating are also beneficial.

Understanding COVID-19

COVID-19 is a viral respiratory disease. Its cause is a severe acute respiratory syndrome called coronavirus 2 (SARS-CoV-2). Despite constant research on the virus, little is known about its pathogenesis. Now, treating COVID-19 is based on informed guesses regarding how the virus behaves.

Experts say that adverse morbidity and mortality outcomes of SARS-CoV-2 have been linked to pre-existing conditions, old age, and high viral loads. Additionally, intensive inflammation also seems to have unfavourable outcomes for SARS-CoV-2 infections. The majority of severe COVID-19 cases have experienced prolonged inflammation that scientists believe is brought about by a cytokine storm, an excessive release of chemical messengers designed to instruct various cells to fight off an infection. Patients in critical conditions have been found to have high circulating concentrations of cytokines, making a case for the association of disease severity with the cytokine storm.

The Role of CBD in Treating Severe Inflammation Caused by COVID-19

Cannabidiol, or CBD for short, could reduce the cytokine storm and severe lung inflammation that seems to be killing so many COVID-19 patients. Murine models of acute lung injury have shown that CBD decreased lung inflammation. Researchers think this happened by inhibiting pro-inflammatory cytokine production in immune cells and suppressing excessive immune responses.

Laboratory studies from the Medical College of Georgia and Dental College of Georgia have preliminary evidence that the use of CBD to treat respiratory distress in COVID-19 could avoid the need for mechanical ventilation and reduce the number of fatalities from acute respiratory distress syndrome (ARDS) caused by the disease. The study was published in the *Journal of Cannabis and Cannabinoid Research* in early July.

ARDS is one of the major causes of death in COVID-19 infections as well as other respiratory viral infections. This research indicates that pure CBD can help with lung recovery from the cytokine storm and severe inflammation associated with COVID-19. Patients taking CBD could then return to healthier levels of oxygen in the body, says a co-author of the study, Dr. Jack Yu.

Specifically, CBD has been found to inhibit pro-inflammatory cytokines. This makes it a

worthy candidate for treating COVID-19. The study mentioned above on a murine model took objective measures of lung function into account and found that CBD therapy led to increased oxygen levels and a drop in cytokine levels and temperature. A detailed lung analysis then showed that critical indicators of destructive inflammation were reduced. Moreover, CBD reversed the physical lung changes from ARDS as well as its clinical symptoms.

CBD Could Help Manage the After-Effects of Lung Damage from COVID-19

Aside from the immediate relief from COVID-19 symptoms through the use of CBD, it also seemed to resolve residual lung damage. Detailed studies of the mice's lungs in the trials revealed that structural damage to the lungs, such as scarring, swelling, and tissue overgrowth, was partly healed thanks to the CBD treatment.

Note: Further studies, particularly in human populations, are needed to confirm these results. These findings regarding CBD were obtained because researchers were able to duplicate ARDS lung damage in a murine model. Additionally, similar research into the impact of COVID-19 on other organs, including the heart, brain, and gut, is needed to better understand the full repercussions.

New Evidence for the use of CBD in Treatment-Resistant Epilepsy

A randomized, controlled study published in late July looked into a pharmaceutical form of highly purified CBD as an add-on therapy for treatment-resistant epilepsy (TRE). This specific CBD formulation delivered sublingually (under the tongue) was shown to be efficacious and safe to use for TRE patients.

A 40-month follow-up of the study found that 19 percent of participants were seizure-free, 73 percent reported more than 50 percent improvement, and 5 percent reported less than 50 percent improvement. The CBD was well tolerated by most participants.

This study's results may apply only to the specific pure CBD formulation given rather than other CBD products, which may contain other substances that affect the efficacy of CBD given as mono-therapy.

Recent Case Studies Add Evidence to CBD Use for Chronic Pain

The *Journal of Opioid Management* recently published an article detailing two patient case reports on the effects of CBD as an anti-nociceptive and anti-inflammatory on patients with neuropathic and radicular pain, specifically chronic back pain.

The patients in each report used the hemp derived CBD cream Baskin Essentials Body Wellness Cream. The article reports that this transdermal cream provided a significant reduction in pain for both patients, warranting further study of CBD products and how they might be effective in treating acute and chronic pain at large.

Promising Evidence Shows CBD Could Improve Dental Health

Up until recently, chlorhexidine was the ingredient in mouthwash found to be most effective at eliminating bacteria. However, a new study published in the *Journal of Cannabis Research* revealed that mouthwash infused with cannabinoids CBD and CBG showed promising results for controlling bacteria.

The study reported CBD and CBG to be as effective or potentially more effective than chlorhexidine. Additionally, mouthwash products containing cannabinoids and chlorhexidine combined were found to be most effective.

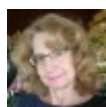
Cannabinoids could offer a safer, natural alternative to the use of alcohol in mouthwash. Chlorhexidine has an unfortunate side effect of tooth staining. This in vitro study is preliminary, but the results now warrant additional research into the use of cannabinoids for controlling mouth bacteria that can cause cavities and periodontal diseases. This was the first study on the use of cannabinoids in mouthwash as key ingredients without added fluoride or alcohol.

Each day new investigations are published on reputable sites. As researchers uncover more clinical and therapeutic information, people will be armed with data to make well informed critical health decisions.

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Dr. Leonard Haberman is a physician and chemist who has been involved in solving chemical and medical problems for 43 years. He graduated from New York University as a dual major in chemistry and biology and went on to obtain a PhD in chemistry from the University of Minnesota where his focus was synthetic methods. He returned to the university in 2005, graduating with an MD degree in 2009. He has published in the open literature. He holds two patents and currently works as a consultant, assisting clients with projects within the disciplines of medicine and chemistry that have potential business applications.

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