

**The Use of Nano-Cannabidiol with Sebrium to
Treat Low Back Pain Can Decrease Pain and Opioid Use**

Cannabis and its pharmacologically active constituents, phytocannabinoids, have long been reported to have multiple medicinal benefits. Cannabidiol (CBD) is a noneuphoric producing constituent of cannabis that has the potential to relieve pain. It has demonstrated efficacy for multiple physical and mental problems^{2,3,5,6,8,9}. Prior to 2012, there were only 9 published studies on the use of cannabinoids for medicinal treatment, however, in recent years over 50 studies have examined the effects of CBD. In some studies, CBD has shown to decrease anxiety and helped increase the duration of sleep in varying doses^{2,11,12}. Most of the research done has been in animal models that have shown potential benefits, but clinical data remains limited in the research. To our knowledge, this is the first study to examine the use of nano-cannabidiol with sebrium to treat low back pain.

To further examine this association, we conducted we reviewed a cohort of patients with a history of low back pain who took nano-CBD with Sebrium DCD to examine the synergistic effect on objective and subjective measures of pain. A cohort ex National Football League (NFL) players who had chronic lower back pain were identified from a network of players. All players completed an initial questionnaire that included the Roland-Morris Low Back Pain and Disability Questionnaire (RM) and Numerical Pain Rating Scale (NPRS) to assess objective and subjective pain score as well as whether or not they were currently taking opioids and NSAIDs through an online portal. All players had documented use of a single capsule, consisting of 25mg nano-CBD composed of 100% hemp and 75 mg Sebrium DCD that they took two times a day for 30 days. All players continued to take their daily medications as needed, and their normal daily physical

activity was not restricted. After one month, the players completed the same questionnaires to assess their measure of pain.

There were 40 players who were reviewed for this analysis. All players were male, average age $44 \pm \text{SD}$ (Range) who have been retired for at least 1 year from the NFL. The average initial RM score was 4.45 ± 3.33 [Range 1-20] compared to post treatment 2.95 ± 2.36 [Range 0-13]. Average initial NPRS was 6 ± 1 [Range 1-6] compared to 3 ± 1 [Range 1-6] post treatment. 100% of players had a decrease in NPRS post treatment. 73% of players had an improvement in their RM score (Table 1). Initially 17 (43%) players reported opiate use and 39 (98%) reported NSAID use. After treatment, 28% reported decrease in opiate use and 93% reported decrease NSAID use.

Table 1

Improvement (%)	Number of Players
0-20	16
21-40	6
41-60	12
61-80	4
81-100	2

There were no adverse events or reported early stopping of treatment. In addition, 77% of participants reported nano CBD helped with falling asleep and staying asleep and 83% reported that they felt less anxious.

The potential benefits of cannabis-based medicine for pain have been positive, but the limited research provides an opportunity to explore its benefits. Some studies suggest that CBD can be used to treat neuropathic pain and provide an alternative pain management option^{1,4,7,10,13}. Our results indicate that the use of nano CBD in combination with Sebrium can have remarkable pain relief for the treatment of chronic low back pain. Our findings found that nano-CBD with Sebrium can help decrease pain, decrease opiate and NSAID use. To our knowledge, this is the first report on the use of nano-CBD with Sebrium to treat lower back pain, and future studies should be conducted to assess its synergistic effect to treat lower back pain in a large cohort of patients.

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