



# Assessing a potential therapeutic effect of cannabidiol for lower back pain, requires appropriately designed studies

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A – Research concept and design, B – Collection and/or assembly of data, C – Data analysis and interpretation, D – Writing the article, E – Critical revision of the article, F – Final approval of the article

We read with interest the article by Kulesza et al. about a narrative review on the question of whether cannabidiol is really effective in treating lower back pain [1]. After a literature search using suitable search terms and application of inclusion and exclusion criteria, the authors included 10 studies in the analysis [1]. One of the articles included was an editorial and four papers were reviews [1]. Cannabidiol has been found to be ineffective in treating lower back pain and further studies are needed to answer the question of interest. The review is impressive, but several points require discussion.

The intention of the review was to assess whether cannabidiol is beneficial for lower back pain and would be expected to include only original data in the analysis. Surprisingly, the authors included one editorial and four review articles in the analysis. The inclusion of such literature significantly limits the validity of the results. We therefore strongly recommend repeating the review, but without including non-original data.

Another limitation is that the causes of lower back pain were not differentiated. Lower back pain has a wide range of causes and pathophysiological mechanisms. Because these different causes may respond differently to cannabidiol, it is imperative to identify the cause of lower back pain in all included patients. Lower back pain can be due to orthopaedic disease, neurological disease, gastrointestinal disease, kidney disease, gynaecological disease, endocrinological disease, immunological disease, vascular disease, haematological disease, coagulopathy, trauma, surgery, or malignancy.

A third limitation is that the type and intensity of acute lower back pain were not included in the analysis. To evaluate

whether cannabidiol is beneficial for lower back pain, it is imperative to know the intensity and type of pain. Only some quantification can help assess whether the studied drug is effective or not.

A fourth limitation is that the design of the study (narrative review) is not suitable for assessing the therapeutic effect of a drug. To assess whether cannabidiol really helps with lower back pain, a randomised, double-blind, placebo-controlled trial is absolutely necessary. Such a study should include a homogenous group of patients in whom lower back pain is caused by the same mechanism and quantified by the patient before and after treatment.

The final limitation is that the formulations of alkaloids administered to patients varied significantly between studies. Since the composition of the drug used determines the positive and side-effects of a drug, it is imperative to use the same study drug for all included patients.

Nevertheless, the study is excellent despite the listed limitations, which should be addressed before drawing final conclusions. Clarifying the weaknesses would strengthen the conclusions and improve the study. Before a final conclusion can be drawn about the effects of cannabidiol for the treatment for lower back pain, randomised, placebo-controlled studies in homogenous patient and control groups are required.

## REFERENCES

1. Kulesza B, Mazurek M, Kurzepa J. Can cannabidiol (CBD) help with low back pain? *Ann Agric Environ Med*. 2023 Sep 28;30(3):549–554. doi: 10.26444/aaem/168674