

# MIGRAINE AND CANNABINOID: A LITERATURE REVIEW

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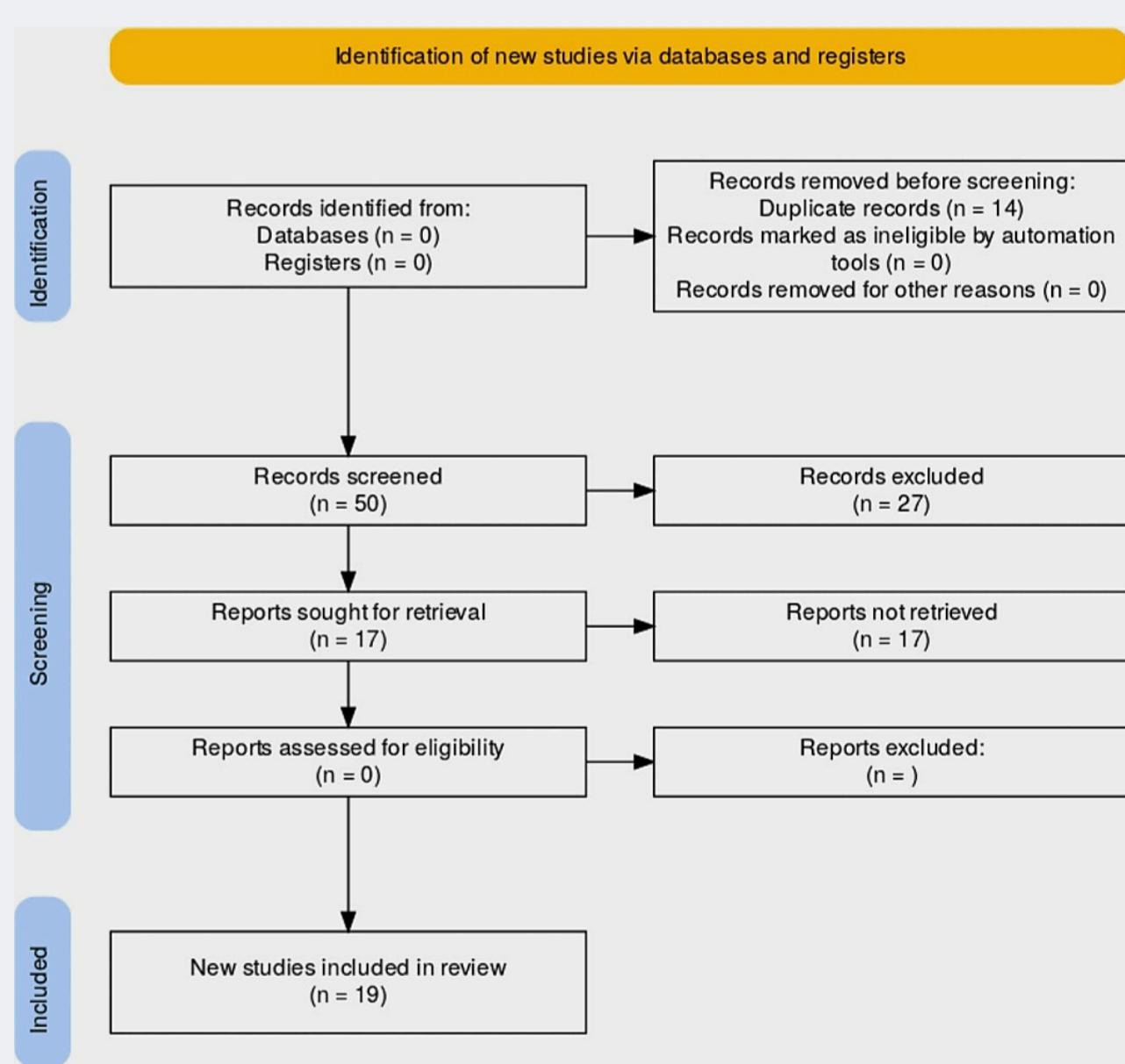
## INTRODUCTION

Migraine is a neurological disorder that affects 15% of the global population and is more common in women. Despite the progress in conventional treatments, many patients either do not respond to the treatment or experience side effects, thus the need for other management approaches. The endocannabinoid system (ECS) which plays a role in pain and inflammation has been identified as a potential therapeutic target because of the observed clinical endocannabinoid deficiency in migraine patients.

**Objective:** This literature review aims to bring together the current evidence on the effectiveness and safety of cannabinoids in migraine treatment, including preclinical, clinical, and observational studies.

## METHODOLOGY

A PubMed search using keywords \*("Migraine" OR "Headache") AND ("Cannabinoid" OR "Phytocannabinoid")\* yielded 1,590 results, narrowed to 50 relevant articles. After screening via the PRISMA framework, 19 studies were selected for analysis.



## RESULTS

- Preclinical studies: CBD and THC combinations showed synergistic effects in reducing migraine-like symptoms in mice, with CBD demonstrating preventive effects, particularly in females.
- Clinical trials: Inhaled THC+CBD (6% THC + 11% CBD) was better than placebo in pain relief (67.2% vs. 46.6%) and symptom reduction, but CBD was not significant.
- There is only one randomized study involving minors, currently in development
- Observational data: Patients reported a 50% reduction in migraine severity with inhaled cannabis, though tolerance development was noted. Opioid substitution rates reached 40-72%, with hybrid THC-rich strains being preferred.
- Mechanisms: Proposed actions include ECS modulation, serotonin release inhibition, and synergistic effects with terpenes.
- There are no studies about dose, efficiency and tolerance in minors

## DISCUSSION

- Cannabinoids, especially THC+CBD combinations, show promise for acute and preventive migraine treatment, with additional benefits in reducing opioid use and alleviating nausea.
- Limitations include tolerance, medication-overuse headache risks, and variability in responses due to differing formulations.
- The lack of randomized trials and standardized dose use difficulties evaluation of its safety and efficiency.
- The lack of overall studies involving children and adolescents is alarming, because we don't know about efficiency, collateral effects, dose and tolerance in this population.

## CONCLUSION

Cannabinoids offer a viable alternative for migraine management, especially for refractory cases, but caution is needed because of tolerability and standardization challenges. More randomized trials and dose/efficiency studies are necessary, especially guarantee the safety, especially of minors.

## REFERENCES