

PubMed

Full text links

**Format:** Abstract

Can J Psychiatry. 2019 Dec 13;706743719892717. doi: 10.1177/0706743719892717. [Epub ahead of print]

## Cannabinoids for the Neuropsychiatric Symptoms of Dementia: A Systematic Review and Meta-Analysis.

Bahji A<sup>1,2</sup>, Meyyappan AC<sup>3,4</sup>, Hawken ER<sup>1,3</sup>.

### Author information

### Abstract

**BACKGROUND:** In 2016, the global number of individuals living with dementia was 43.8 million, representing a 117% increase from 1990—mainly due to increases in aging and population growth. Up to 90% of individuals with dementia experience neuropsychiatric symptoms (NPS). However, the limitations of current treatments for NPS have driven the search for safer pharmacotherapies—including cannabinoids.

**AIM:** To assess the efficacy and acceptability of cannabinoids for the treatment of NPS in individuals with dementia.

**DESIGN:** Systematic review and meta-analysis of clinical trials.

**SETTING AND PARTICIPANTS:** Of 6,902 papers, 9 were eligible ( $n = 205$ , 44% female,  $78 \pm 7$  years, 85% Alzheimer disease). Trials were in North America and Europe and explored tetrahydrocannabinol ( $n = 3$ ), dronabinol ( $n = 5$ ), or nabilone ( $n = 1$ ).

**MEASUREMENT:** Titles/abstracts were independently screened by one reviewer and reviewed by a second. Full-text screening was by two reviewers with discrepancies resolved via a third reviewer. We extracted data on the standardized mean difference (SMD) for several NPS instruments, trial completion, and adverse events. Data were pooled using random-effects models.

**FINDINGS:** Cannabinoids led to significant improvements across NPS instruments, including the Cohen Mansfield Agitation Inventory (SMD = -0.80; 95% confidence interval [CI], -1.45 to -0.16), the Neuropsychiatric Inventory (SMD = -0.61; CI, -1.07 to -0.15), and nocturnal actigraphy (SMD = -1.05; CI, -1.56 to -0.54h). Cannabinoids were well-tolerated, with an overall trial completion rate of 93% (193/205) and no serious treatment-related adverse events. Treatment efficacy was associated with baseline dementia severity and dose, but not dementia subtype, age, or sex. The overall study quality was rated as low.

### CONCLUSIONS:

There is preliminary evidence for the efficacy and tolerability of cannabinoids as treatments for NPS. Population-based studies are needed to characterize their real-world effectiveness and acceptability.

**KEYWORDS:** Alzheimer disease; cannabinoids; geriatric psychiatry; meta-analysis; pharmacotherapy; systematic reviews

PMID: 31835954 DOI: [10.1177/0706743719892717](https://doi.org/10.1177/0706743719892717)

---

**LinkOut - more resources**

