Case Study: Melatonin and Sleep Outcomes in Dementia

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## Introduction

This case study follows the 5-step process for accessing and using evidence in response to a request from the Joint Formulary Group (JFG) in the Bristol, North Somerset, and South Gloucestershire Integrated Care System (BNSSG ICS). A search was conducted to find evidence on melatonin for treating sleep disorders in adult patients with dementia once physical/psychological causes are ruled out, and sleep hygiene measures have failed

## Identify

Using PICO, the scope of the evidence search was defined as:

**Population**: Adults with dementia

**Intervention**: Melatonin

**Comparison**: Other treatment options

**Outcomes**: Sleep- Patient safety, clinical effectiveness (in sleep management), strength of the evidence, cost-effectiveness or resource impact, place in therapy relative to available treatments, national guidance and priorities, local health priorities, equity of access, any other considerations

## Access

A Clinical Effectiveness Programme Officer was asked to conduct the search and report findings.

The following search question was addressed:

The search strategy involved searching the following databases and websites:

* *Cochrane Database of Systematic Reviews*
* *PubMed*
* *Trip Medical Database*

The following search strategy was used:

*Melatonin AND dementia AND sleep*

Additional articles were identified through recommendations and ‘snowballing,’ i.e., following up on reference lists of the documents returned using the search strategy outlined above.

## Appraisal

In total, 6 articles were identified. The evidence base for melatonin treatment for sleep outcomes in patients with dementia has been generated by trials looking predominantly at Alzheimer’s Disease (AD) rather than other types of dementia. The evidence base for melatonin treatment for sleep outcomes in dementia is limited by a shortage of studies, the 6 systematic reviews (SRs) included in this review relied on a total of 11 randomised control trials (RCTs). Where assessed by study authors against GRADE[[1]](#footnote-1), the majority of findings generated were of low to moderate strength/ certainty.

## Apply

Findings were reported in an evidence review. The review found some evidence to suggest that melatonin may be helpful for sleep outcomes in adults with Alzheimer’s Disease (AD) in terms of sleep efficacy, total sleep time at night, and sleep latency. It also found evidence that melatonin may have a good safety profile in this population.

## Share and Manage

The findings of the review were consolidated into an evidence review. This report was shared with the JFG to inform decision making around using melatonin for sleep outcomes in dementia. With permission from the JFG, the report was shared on Health Innovation West of England’s Evidence Repository on the Future NHS platform, to promote a culture of shared learning.

1. <https://bestpractice.bmj.com/info/toolkit/learn-ebm/what-is-grade/> [↑](#footnote-ref-1)