

Sleep Nutrition Supplements in Taiwan: A Literature Review of Usage, Efficacy, and Safety

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Objective:

This study aims to provide a broad review of commonly used sleep nutrition supplements in Taiwan, focusing on GABA, tryptophan, magnesium, sesamin, and probiotics. This review aims to assess their usage, efficacy, and safety, while evaluating their potential as non-pharmacological treatments for sleep disorders.

Methods:

A literature review was conducted by searching databases such as PubMed. The search focused on studies from the past 10 years using keywords such as "GABA," "tryptophan," "magnesium," "sesamin," "probiotics," and "sleep supplements." Inclusion criteria included clinical trials, review or meta-analysis. The studies were analyzed based on their quality and relevance, and data on the efficacy and safety of these supplements were extracted for review.

Results:

The literature review identified varying levels of evidence supporting the use of these supplements for sleep improvement. GABA supplementation showed potential in reducing sleep latency by approximately 5 minutes and improving sleep efficiency by 2.3%, with additional benefits for stress reduction. Tryptophan supplementation, particularly at doses of 1g or more, was associated with a significant reduction in wake after sleep onset by 56.55 minutes and improved overall sleep quality. Magnesium supplementation in older adults demonstrated a reduction in sleep onset latency by 17.36 minutes and modest improvements in total sleep time, though the quality of the supporting evidence was low. Sesame lignans, when combined with vitamin E, were found to improve subjective measures of fatigue and sleep quality after 8 weeks of use, although more research is needed to confirm these results. The probiotic *Lactobacillus plantarum* PS128 showed promise in improving sleep quality, particularly in the deep sleep stages, as well as reducing depressive symptoms and fatigue. Overall, the safety profiles of these supplements were generally acceptable, with minimal reported side effects.

Conclusion:

While these sleep supplements are popular in Taiwan, the evidence supporting their efficacy varies. Tryptophan and magnesium show the most substantial potential in improving sleep quality. GABA and probiotics may offer additional benefits for

stress-related sleep disturbances. Sesame lignans, though promising, require more research. Further large-scale, long-term studies are needed to fully assess efficacy and safety. These findings suggest that healthcare providers should consider patient-specific sleep issues and existing evidence when recommending these supplements as part of a holistic approach to sleep management.

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