



EUROPEAN JOURNAL OF TRANSLATIONAL
AND CLINICAL MEDICINE 2024;7(2):00-00

REVIEW ARTICLE

Melatonin as a potential treatment option in diabetes complications

Abstract:

Recent research indicates that disrupted sleeping and eating patterns along with ageing can contribute to the development of diabetes mellitus (DM) via effects on circadian rhythms and metabolic control. The use of anti-DM drugs alone is insufficient to achieve control of the reduction in β -cell function, insulin resistance, inflammatory mediation, oxidative stress and the DM-related complications. To prevent micro- and macrovascular DM complications, researchers are exploring the therapeutic potential of melatonin, a hormone secreted from the pineal gland with peak at night-time. We searched the Cochrane Library, PubMed and Google Scholar databases for relevant articles. Review articles, clinical research and case studies about the impact of melatonin on DM complications, the anti-oxidant action of melatonin, anti-inflammatory action of melatonin and the combination of melatonin plus DM drugs were included in this review. One hundred three articles that met our selection criteria, published between November 2004 and January 2024 were analyzed. This review aims to summarize the literature regarding melatonin's mechanisms of action and potential as a therapeutic option in the treatment of DM complications.