Department of Neurology

Treating Insomnia in Mild Cognitive Impairment (MCI)

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Sleep disturbances are among the most common—and potentially modifiable—symptoms in Mild Cognitive Impairment (MCI). This innovative study combines neuromodulation (Transcranial Magnetic Stimulation) with Cognitive Behavioral Therapy for Insomnia (CBT-I) to improve sleep quality and cognitive outcomes.

By pairing a behavioral approach with targeted brain stimulation, investigators aim to enhance restorative sleep, reduce cognitive fatigue, and explore whether sleep improvement can slow cognitive decline. Participants complete structured therapy sessions and at-home cognitive assessments, contributing to a growing effort to identify effective, non-pharmacologic treatments for memory loss and sleep disruption in aging.

ClinicalTrials.gov ID: NCT06687161

Recruiting adults age 65+ with MCI and chronic insomnia.

The A² Study: At-Home, Real-Time Monitoring for Alzheimer's

Investigators: Drs. Chun Lim, Dan Press, and Meaghan McKenna

Affiliation: BIDMC Cognitive Neurology Unit

The A² study explores how digital, real-time assessments can detect early cognitive changes in Alzheimer's disease—well before symptoms are noticeable in the clinic. Using app-based memory tasks and passive monitoring tools, this project is developing a novel, at-home system for continuous cognitive tracking.

By analyzing daily patterns of performance and activity, the team hopes to identify subtle changes that may signal disease progression or treatment response. This work could lay the foundation for more adaptive, personalized interventions—and transform how clinicians monitor cognition outside the hospital.