Treating Chronic Sleep Problems

Researchers found preliminary evidence for abnormalities in the effects of sleep on brain plasticity.

**Description:** A Comprehensive Approach to Insomnia tapped sleep medicine, neuroscience and epidemiology researchers to create an evidence-based, behavioral treatment model. Researchers tested the hypothesis that insomnia occurs as a result of abnormalities in slow wave sleep, and they also assessed the epidemiology of insomnia and behavioral treatment efficacy using the Wisconsin Sleep Cohort Study.

**Results:** Researchers performed the first high-resolution EEG study of sleep in insomnia, and found preliminary evidence for abnormalities in the effects of sleep on brain plasticity. These findings could lead to a better understanding of sleep abnormalities related to insomnia and better therapies to treat sleep problems in patients with a variety of disorders. They also tested a group behavioral therapy approach for participants with chronic insomnia in the Wisconsin Sleep Cohort Study and found significant improvement in their insomnia symptoms that persisted for six months after treatment was completed. The Wisconsin Sleep Cohort has made several significant contributions to the field of sleep medicine, including a possible link between insomnia and an increased risk for depression. These results suggest that insomnia treatment may benefit a broader range of individuals in terms of improving sleep and daytime functioning, as well as possibly reducing risks for adverse medical and psychiatric outcomes.

**Next Steps:** Results from the high-density EEG studies will be used as pilot data for grant submissions to the NIH. This technology will be better integrated into clinical practice at Wisconsin Sleep, which will lead to ongoing data collection from clinical subjects and the establishment of a clinical research database. Results from the behavioral intervention will be used to develop clinical programs to disseminate insomnia treatment more broadly as well as to investigate the impact of these treatments on health outcomes.

**A COMPREHENSIVE APPROACH TO INSOMNIA**

**Principal Investigator:** Ruth Benca, MD, PhD, Psychiatry, SMPH

**Grant Program:** Collaborative Health Sciences

**Award:** $299,654 over two years