

Short bursts of brain activity during sleep may be key for memory consolidation

Sleep is essential for memory. Mounting evidence continues to support the notion that the nocturnal brain replays, stabilizes, reorganizes, and strengthens memories while the body is at rest. Recently, one particular facet of this process has piqued the interest of a growing group of neuroscientists: sleep spindles. For years these brief bursts of brain activity have been largely ignored. Now it seems that examining these neuronal pulses could help researchers better understand—perhaps even treat—cognitive impairments.

Sleep spindles are [a defining characteristic](#) of stage 2 [non-rapid eye movement \(NREM\) sleep](#). These electrical bursts between 10-16 Hz last only around a second, and are known to [occur in the human brain](#) thousands of times per night....

“Spindles appear to play a central role whenever memories during sleep are undergoing transformation that might be necessary to integrate them into neocortical long-term storage networks,” Jan Born, a professor of behavioral neurobiology of the University of Tübingen, told *The Scientist* during a [conference](#) dedicated to sleep spindles held in Budapest in May.

Fewer spindles, therefore, would be expected to coincide with a breakdown in memory consolidation.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: [Minding the Pulse of Memory Consolidation](#)