

Making headway on beta-blockers and sleep

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Over 20 million people in the United States take beta-blockers, a medication commonly prescribed for cardiovascular issues, anxiety, hypertension and more. Many of these same people also have trouble sleeping, a side effect possibly related to the fact that these medications suppress night-time melatonin production. Researchers at Brigham and Women's Hospital (BWH) have found that melatonin supplementation significantly improved sleep in hypertensive patients taking beta-blockers.

The study will be electronically published on September 28, 2012 and will be published in the October print issue of *SLEEP*.

"Beta-blockers have long been associated with [sleep disturbances](#), yet until now, there have been no clinical studies that tested whether melatonin supplementation can improve sleep in these patients," explained Frank Scheer, PhD, MSc, an associate neuroscientist at BWH, and principal investigator on this study. "We found that melatonin supplements significantly improved sleep."

The research team analyzed 16 hypertensive patients who regularly took beta-blockers as treatment for their hypertension. The study participants were given either a melatonin supplement or placebo to take each night before bed. To avoid bias, neither the participants nor the researchers knew which pill they were taking. During the three week study, the participants spent two separate four-day visits in lab. While in the lab, the researchers assessed the participants' [sleep patterns](#) and found a 37-minute increase in the amount of sleep in the participants who

received the melatonin supplement compared to those who received placebo. They also found an eight percent improvement of sleep efficiency and a 41 minute increase in the time spent in Stage 2 sleep, without a decrease in [slow wave sleep](#) or REM sleep.

"Over the course of three weeks, none of the [study participants](#) taking the melatonin showed any of the adverse effects that are often observed with other, classic [sleep aids](#). There were also no signs of 'rebound insomnia' after the participants stopped taking the drug," explained Scheer, who is also an assistant professor of Medicine at Harvard Medical School. "In fact, melatonin had a positive carry-over effect on sleep even after the participants had stopped taking the drug."

The researchers caution that while this data is promising for hypertensive patients taking beta-blockers, more research is needed to determine whether patients taking beta-blockers for causes other than hypertension could also benefit from melatonin supplementation.

Provided by Brigham and Women's Hospital

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