

New disposable, wearable patch found to effectively detect sleep apnea

June 4 2017



Results of a definitive clinical trial show that a new, disposable diagnostic patch effectively detects obstructive sleep apnea across all severity levels. Credit: Somnarus, Inc.

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Results show that the total rate of clinical agreement between the [patch](#) and standard in-lab polysomnography was 87.4 percent with 95 percent confidence interval of 81.4 percent to 91.9 percent. According to the authors, the study results will be used in obtaining approval from the U.S. Food and Drug Administration for the device, SomnaPatch. The skin-adhesive diagnostic patch weighs less than one ounce and records nasal pressure, blood oxygen saturation, pulse rate, respiratory effort, sleep time and body position.

"Our study provided clinical validation of a new wearable device for diagnosing sleep apnea," said principal investigator Maria Merchant, PhD, CEO of Somnarus Inc. "It was most surprising to us how well this inexpensive miniature device performed in comparison with in-lab sleep studies."

Simultaneous polysomnography and patch recordings from 174 subjects were included in the analysis. An additional home usability study found that 38 out of 39 users were successful in activating the diagnostic patch and collecting at least 4 hours of sleep data while relying only on the instructions included with the [device](#).

"Most home sleep diagnostic devices are difficult for patients to use and are disruptive to patient's sleep," said Merchant. "Our study showed that this wearable home sleep monitor is very comfortable, easy to use and does not negatively affect sleep."

The research abstract was published recently in an [online supplement of the journal Sleep](#) and will be presented as a poster presentation on Sunday, June 4, and as an oral presentation on Wednesday, June 7, in Boston at SLEEP 2017, the 31st Annual Meeting of the Associated Professional Sleep Societies LLC (APSS), which is a joint venture of the American Academy of Sleep Medicine and the Sleep Research Society.

More information: Abstract Title: Clinical Validation of a Diagnostic Patch for the Detection of Sleep Apnea

Abstract ID: 0448

Poster Presentation Date: Sunday, June 4

Poster Presentation: 5 p.m. to 7 p.m., board 246

Oral Presentation Date: Wednesday, June 7

Oral Presentation: 4:30 p.m. to 4:45 p.m., room 304/306

Provided by American Academy of Sleep Medicine

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