

Can't sleep? More technology devices promise relief

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Do you believe drinking coffee is keeping you up at night? It's not - as long as you're consuming less than four cups per day.

That's according to a new survey from SleepScore Labs, a spinoff of [sleep apnea](#) medical device maker ResMed.

Released at the CES 2017 consumer electronics show earlier this month, the SleepScore Labs survey collected data from just under 21,000 people

over 1.5 million nights. It highlights how sleep is getting more attention in technology circles.

At CES 2017, more than 20 sleep technology firms showed off their latest gadgets in a new Sleep Technology Marketplace. They ranged from sleep tracking mattresses to devices that enable temperature controlled pillows.

Fitness brands also joined the sleep product parade. Under Armour touted its Athlete Recovery Sleepwear. Pitched by New England Patriots' quarterback Tom Brady, the \$200 pajamas have a fabric pattern that claims to absorb "far infrared" energy and transfer it to the body to reduce inflammation, improve recovery and promote better sleep.

CES 2017 also was the coming out party for SleepScore Labs, based outside San Diego. A new joint venture of ResMed, TV cardiologist Dr. Mehmet Oz and New York-based Pegasus Capital Advisors, the company's goal is to build an ecosystem around accurately measured sleep.

"We have a lot of people going to bed for enough hours but they are not actually sleeping at that time," said Colin Lawlor, chief executive of SleepScore Labs. "If you wear a wearable device, it is probably going to tell you that you are sleeping fine. But the truth is you are awake for a significant amount of time."

For now, SleepScore's efforts center on ResMed's S+ sleep tracker, though it expects to have additional products, said Lawlor.

The S+ sits on a nightstand, so users don't wear anything. It contains proprietary high resolution sensors that measure respiration and body movement, along with light, noise and temperature in the bedroom.

The sensors are good enough to see a person's pulse, said Lawlor. The radio frequency range is short, so the device can be positioned to monitor the right person.

Using thousands of hours of breathing data, ResMed built algorithms that recognize deep sleep respiration, REM sleep breathing and light sleep patterns, said Lawlor. It reports how much time the user spent in each phase via a smartphone app.

This data is compared to an average to create a SleepScore, which the company hopes becomes the standard measurement of sleep - like calories are for food. The SleepScore in the survey released at CES was 77 out of 100.

"In the consumer electronics landscape, there are more and more products that claim to measure sleep," said Lawlor. "The problem for the consumer and ultimately the companies is nobody knows if any of these things work."

ResMed's S+ costs \$130 but is on sale for \$50 on the SleepScore Labs website through May. There are competitors, ranging from pure sleep trackers such as Beddit and Sense to wearable devices from Fitbit and Jawbone.

Some sleep tracking devices have come under criticism for how accurately they measure sleep. Lawlor claims ResMed has solved that problem with the S+. Now SleepScore hopes to help consumers understand how they're sleeping and why it's important to monitor.

"And then for the industry, we are aiming to provide access to the SleepScore technology as a service to help them test, validate and improve their products," he said. "We think we can enable the ecosystem around that simple idea: If you can measure it, you can manage it."

To help get the word out, SleepScore Labs released its survey results on sleep at CES. It probably contains bias, acknowledged Lawlor. The data came from users of ResMed's S+. So participants likely have sleep problems that prompted them to purchase the device.

Still, its findings offer a glimpse of sleep habits of Americans. Among its findings:

Seventy-nine percent of participants got less than the recommended seven hours sleep a night.

Women sleep on average 24 minutes more a night than men.

Thirty minutes of daily exercise adds 14 extra minutes of sleep per night.

Participants who had one or two drinks slept on average 16 minutes more than people who had more than two drinks, or none at all.

Half of participants regularly use [sleep aids](#), ranging from prescription medications to over-the-counter sleeping pills/herbal [sleep](#) supplements.

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