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Ebb Therapeutics to launch wearable technology for sleeplessness

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Created by a luminary sleep researcher and doctor, the intelligent device features novel cooling technology to calm "a racing mind"



Ebb Therapeutics is on a mission to make an impact in both the professional healthcare and consumer sleep markets. At CES 2020 (Booth # 43824/Sands Expo, January 7-10, Las Vegas, NV), the sleep tech company will debut a wearable sleep device with proprietary technology that targets the root cause of sleeplessness: a racing, or overactive, mind.

THE RESEARCH

Founder and Chief Medical Officer Dr. Eric Nofzinger spent 35 years studying the brain mechanisms of healthy sleep. Studies suggest that reduction in metabolic activity in the frontal cortex (the thinking part of the brain) is key to the restorative properties of sleep. Meanwhile, higher-than-normal activity when the body is at rest leads to hyperarousal, which is often associated with clinical complaints of not being able to turn off one's mind when trying to sleep. While Director of the Sleep Neuroimaging Research Program at the University of Pittsburgh School of Medicine, Dr. Nofzinger discovered that when the forehead is cooled, brain activity decreases and the mind can relax. This finding inspired Ebb.

"Sleeplessness is an epidemic. More than ever, people are struggling with being able to 'turn off' their minds in order to get to sleep," said Dr. Nofzinger. "Lack of sleep can have a dire effect on one's ability to function mentally, emotionally and physically, so it is critical that we keep innovating in this space in order to offer safe, drug-free solutions that work."

THE PRODUCT AND TECHNOLOGY

Ebb is the first and only sleep solution that uses precise cooling, called PrecisionCool™ Technology, to reduce metabolic activity in the frontal cortex. A scientifically-engineered, fluid-filled headband softly wraps around the head and cools the forehead using an intelligent cooling algorithm in order to maintain an optimal temperature range over the course of the night. As brain activity declines, the mind calms and the user is able to fall into a deeper, more restorative sleep.

The device hits the consumer market after several years of research and fundraising. At the end of 2016, the company closed a $38 million Series B round led by KKR & Co. LP. (Other investors included Versant Ventures, Arboretum Ventures, and Partner Ventures.) These investments allowed the company to conduct the type of studies and clinical tests needed to perfect the technology, and build a first-class team, which includes former executives from Respironics, a leader in sleep and respiratory markets that was acquired by Philips in 2008 for $5 billion.

At the show, the startup will also tease another innovation, set to hit the market in late 2020: a second-generation device with similar cooling technology that is battery-powered and portable, for consumers with busy, on-the-go lifestyles.