The CES companies hoping your brain is the next big thing in computing

Is this the dawn of brain wearables?

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Zander Labs (Daniel Cooper for Engadget)

At every CES I've ever been to, there's been one or two gadgets promising to boost your mental health. In recent years, the number of companies making forays into this space has grown, and will likely continue to do so in the

future. Could it be, much like the number of people wearing heart-monitoring wearables today, everyone will be strapping an EEG to their skulls a decade or so down the line? It's more likely than you think, so it's worth asking what these devices are good for, what benefit they could bring, and where does the science end and the hype begin.

An Electroencephalogram (EEG) is a clinical tool to monitor the electrical activity of our brains. Put very simply, our minds are constantly moving ions around, and when they reach the scalp, it's possible to measure those ions. By placing electrodes on the scalp, you can record the changes in voltages pushed out by our brains more or less in real time. These voltages are commonly grouped into categories, which are often described as brain waves. Each one represents a different state of mind: Gamma (hard thinking), Beta (anxious or active), Alpha (relaxed), Theta (creative, or dreaming) and Delta (asleep).

Professor Karl Friston at University College London is one of the world's most influential neuroscientists and an expert in brain imaging. He explained that these technologies can be used to diagnose issues both in the structure and function of the brain. And while there are many technologies which can look at how our brains work, "we're a long way away from understanding the brain like we understand the heart." Broadly speaking, EEGs are a fairly simple tool for looking at

how our minds work, but they have one benefit over more complex methods such as fMRI (functional Magnetic Resonance Imaging), since they work in real time.

Consumer-use EEGs are nothing new — in 2011 I tested the Zeo Mobile, a small device which you stuck to your forehead and wore overnight. It monitored how well you slept and sounded an alarm when you were at the top of a sleep cycle, so you woke up pretty easily. It worked well but with one downside: It's hard to sleep with a hard plastic puck stuck to your forehead.

EEGs are more recently used as part of brain computer interfaces, or for neurofeedback tools to help you calibrate the quality of your meditation. InteraXon, for instance, makes the Muse headbands which will monitor your brain waves, telling you when you shift states. Last year, EEG startup Neurable partnered with Master & Dynamic to launch the MW75S Neuro, a pair of high-end headphones designed to track your focus levels. When your attention starts to wane, the system will alert you, advising you to take a rest with the hope of alleviating burnout.

Neurable (Daniel Cooper for Engadget)

At CES this year, Neurable announced a partnership with HP's gaming arm HyperX to produce EEG headsets with specific benefits for gamers. As gamers are looking for any way to improve their performance, the company has developed algorithms and training programs to help. You might already know that being in a place of high stress isn't great for your concentration and focus. Consequently, Neurable research scientist Dr. Alicia Howell-Munson walked me through a system that encourages you to reach a state of calm focus with demonstrable improvements in reaction time and accuracy. It's a system that was initially designed in partnership with Singapore's Air Force to help ensure pilots remain in a state of calm focus.

I sat through this demo myself, initially testing my skills in Aimlabs (a tool people use to test their reflexes) where my accuracy and reaction times were measured. Then, while wearing Neurable's headset, I had to practice focusing my attention on a galaxy of dots, the greater my focus, the slower and closer together the dots got. That wasn't an easy process, and it took me nearly five minutes to reach the point where I could push all of the dots to coalesce into a single point on the screen. But, when I had, I retook the shooting gallery, and saw dramatic spikes in my performance. My accuracy increased from 91.3 to 99.1 percent, while my reaction time fell from 623ms to 532ms.

Neurable HyperX headset (Daniel Cooper for Engadget)

Neurable believes that its systems, which are designed to integrate with any manufacturer's gear, has the potential to dramatically increase a person's brain health and productivity. For instance, by taking a break when a person's focus started to wane, they were able to bounce back and function for far longer than if they'd simply pushed harder. Similarly, the company can advise on your cognitive speed and brain age and guide you toward making healthy choices. The company says that this isn't just about wellness, either, as being able to identify loss of focus is vital, for instance, to help reduce auto accidents when truck drivers feel fatigued.

Co-founder Adam Molnar explained that the benefits of this technology compound over time, so the more practice a user has in finding that mental state of calm focus, the easier it will be to maintain it for longer. CEO Ramses Alcaide added the company's aim is to enable people to visualize the often invisible symptoms of cognitive stress to ensure they're looking after themselves. He added that one thing that separates Neurable from other companies is that it's looking at far finer-grain detail from its EEG data.

MyWaves (Daniel Cooper for Engadget)

There are plenty of companies at CES that are using EEGs for more specific goals, such as MyWaves. It uses an EEG as part of its broader offering to use sound patterns to make it easier to go to sleep. It sells you a pricey forehead-worn EEG which you wear for a few nights over the course of a year. From there, the system produces a half hour audio file that will mirror the pattern of your delta brainwaves. It claims that, if you listen to the track before you go to bed, the experience of hearing your delta waves will help you fall asleep faster and experience more REM sleep.

And there are plenty of companies which are building EEGs for you to wear to keep an eye on your mental health. Brain-Life, for instance, showed off an early prototype of Focus+, a headband EEG with a companion app that can offer

feedback on your cognitive load. It can also tell you how long you can sustain your attention and how well your mind relaxes and recovers. The company didn't have details on when the hardware would be available or how much it cost, as it's still early days.

BrainEULink. (Daniel Cooper for Engadget)

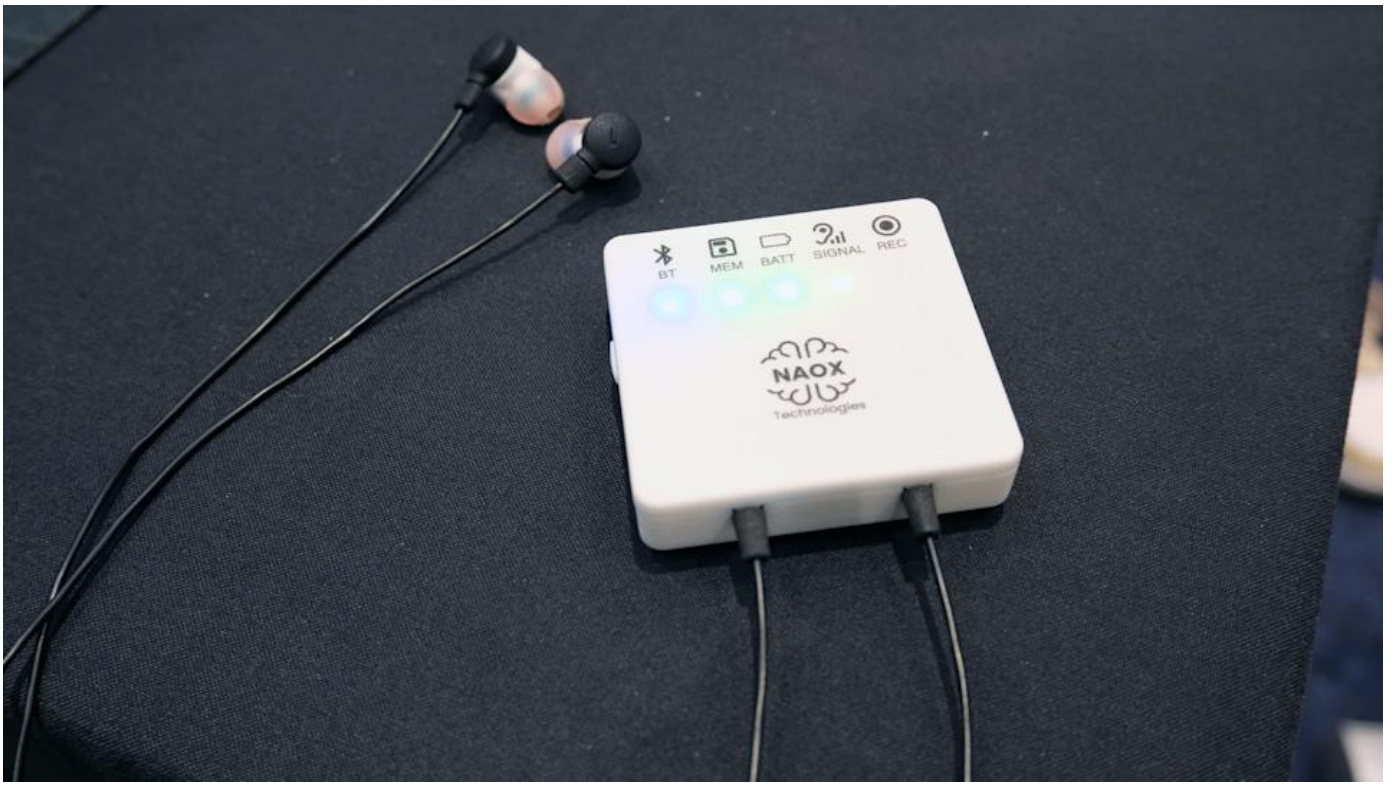
There is broad potential to use an EEG as a brain computer interface, such as the one worked on by Braineulink. That company has combined an EEG with an AR headset to enable people to interact with the world just with their brains. For instance, in a demonstration in the show floor at CES, I was able to turn a light on and off by "focusing" on it, although it's hard to know how useful that would be in, for instance, creating an assistive device for folks with limited mobility. Like Brain-Life, it's early days, and so there's no

product that we can point to, but it's clear we're going to see more startups looking to enter this world.

Brain-Life (Daniel Cooper for Engadget)

As EEGs become more commonplace, it's likely they'll be packaged in smaller devices which fit more seamlessly into our lives. One such example is NAOX, a French startup which has built a wearable, clinical-grade EEG into a pair of earbuds for the sort of longitudinal testing required to diagnose conditions like epilepsy. But the company is also planning on incorporating the technology into a pair of true wireless earbuds.These headphones won't be arriving until the end of 2026, but Naox says the tech is small enough that it can be integrated with other companies earbuds. Consequently, it's certainly plausible we could see plenty of earbuds that will keep an eye on our brain health as a side

hustle.



Naox (Daniel Cooper for Engadget)

NAOX was co-founded by Dr. Michel Le Van Quyen who, at a talk in London in December 2025, talked about the rationale for creating an in-ear ECG. Essentially, he was looking to build a brain equivalent to the Apple Watch's continuous heart rate monitoring (and ECG). I was curious about the science behind an ear-mounted EEG given they commonly use the scalp. Professor Friston said that an ear-mounted EEG is potentially more useful as "you can get slightly closer to the sources of activity." And that it makes a lot of sense for a consumer-grade EEG to be added to wireless earbuds given their utility in practices like meditation.

Naox's prototype TWS earbuds sensors. (Daniel Cooper for Engadget)

One downside of the proliferation of wearable EEGs is that it could lead users to jump to the wrong conclusions about their mental health. For instance, if someone is to be diagnosed with a condition such as epilepsy, they need to undergo a 24-hour perambulatory EEG. As Professor Friston explained, the recording of that 24 hour EEG would be "carefully scrutinized by experts who are able to run a differential diagnosis ... to specify what further investigations are required." He, like a lot of clinicians, is concerned about ill-informed consumers using these devices to make medical interventions without consulting a professional.

Friston added that people shouldn't expect wearable EEGs to be magic bullets for their brain health or cognition. He said the best way for a consumer to approach them is by treating

them with the same level of reverence as a household thermometer. “Are thermometers useful in managing the wellness of my children?, Yes,” he explained, “can your thermometer tell you what particular virus you have? Absolutely not.” “In the context of well-being and to augment or validate practices such as mindfulness and meditation, they can be fun and useful quantitative devices.” But, fundamentally, that is all he feels they can be, especially right now.

CES 2026 is winding down in Las Vegas, and Team Engadget is finishing a week that saw hundreds of announcements from major brands including Lenovo, Samsung, LG, NVIDIA and more. See what we named as the Best of CES 2026, then scroll back on our CES 2026 liveblog to see how events progressed throughout the week. Prefer quick summaries? See recaps of all the cool tech we saw Monday, Tuesday and Wednesday.