

ABC NEWS

'Fit bit for the brain' that tracks epileptic seizures potential game-changer, researchers say

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A new device developed in Melbourne that is like a "fit bit for the brain" has the potential to predict and prevent epileptic seizures, scientists say.

The Minder — developed at St Vincent's Hospital and the Graeme Clark Institute — is fitted under the skin on the scalp and records brainwaves.

The data is then recorded and stored on a mobile phone app and can be used to alert epilepsy sufferers on the likelihood of a seizure occurring.

Neurologist and lead researcher Professor Mark Cook said the data could also help doctors diagnose epilepsy and adjust medication.

"It's very difficult to figure out how many seizures people are having, and when they're having seizures it's often difficult to figure out if the treatment's working or how to make them safe," he said.

"We can figure out from [the data] how likely a seizure is to occur in the hours ahead so it can appear like a weather forecast, and say in the next few hours they may be a 60 per cent chance of seizures.

"[It will] give people that kind of warning so they can figure out if it's safe to do things and go out, as well if their treatment's working.

"It will be a game changer for people because they will have more control over their life," he said.

Professor Cook said the device could help "hundreds of thousands" of epilepsy sufferers and could be used to notify people if someone had blacked out.

"One per cent of the population has epilepsy chronically and many of them aren't adequately controlled by treatments that we have now, so it will help all of those people," he said.

Professor Cook said medication for people with epilepsy is mostly long-term, so not many treatments were available to stop seizures immediately.

"Probably more of them [treatments] would be developed if we could figure out when seizures were going to happen," he said.

So far the Minder has only been trialled on sheep, but has been in development for more than five years.

Researchers say the device could be four years away if enough money is raised to manufacture it.

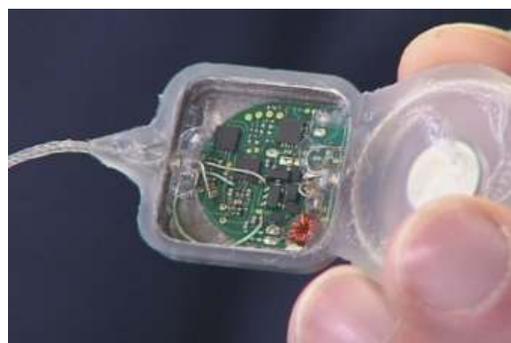


PHOTO: The implant is fitted under the skin on the scalp and records brainwaves. (ABC News)

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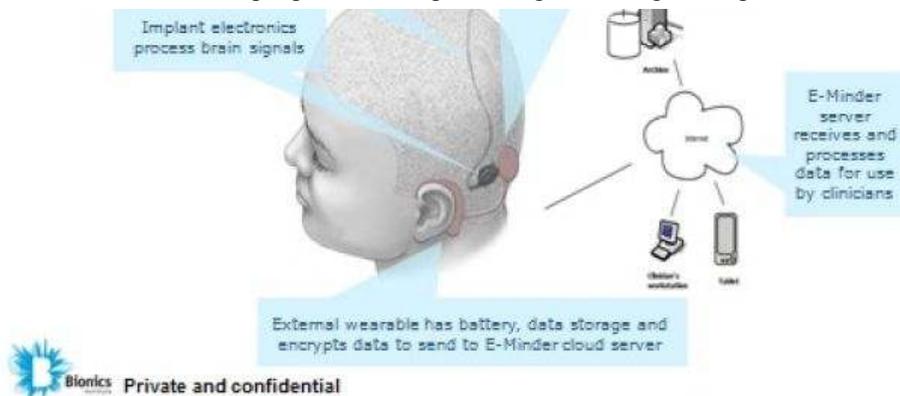


PHOTO: Data collected from the device could help doctors diagnose epilepsy and adjust medication, researchers say. (Supplied)

Device could save health system money, researchers say

Bionics Institute chief executive Robert Klupacs said the device could end up costing patients between \$15-\$25,000.

"It sounds like a lot, but when you work out how much money people are paying now to be monitored over three, six, 12-months, it actually costs more than that," he said.

Mr Klupacs said he hopes the device could be tested in clinical trials within 12 months.

"What's holding us back is getting the device to be manufactured," he said.

"The whole goal of Australian science has to be to get technology that's going to improve patients' lives.

"Australians can do this, they've got the capability to do it both clinically, engineering-wise our issue now is to commercialise that."

Topics: epilepsy, health, science-and-technology, diseases-and-disorders, melbourne-3000, vic

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