

Fitbit on a brain wave

Trial sets seizure hope

THE first two Victorian patients have had a "fitbit for the brain" implanted in a world-first trial of a device that aims to warn of impending epileptic seizures.

The Melbourne-designed device gives patients a "weather forecast" by tracking their brain activity and alerting them that they may soon suffer a seizure.

It is hoped the device could help those who suffer seizures with little warning, with medication and surgery failing to help a third of the 250,000 Australians with epilepsy.

Carrum Downs grandfather Rob Bechaz, 60, became the first patient to have the device implanted, by St Vincent's neurosurgeon Michael Murphy, late last year.

He was diagnosed with epi-

BRIGID O'CONNELL

lepsy at age 18, and had surgery five years ago to remove part of his brain's frontal lobe that housed his seizure hot spot.

Despite this and the daily medication he takes, Mr Bechaz still has about a dozen absence seizures a month, where he briefly loses awareness.

"Hopefully this leads to better treatments for people," Mr Bechaz said. "That's why I'm doing it. At my age, I just want to make my quality of life — of what I've got left — better."

"My family has put up with enough. If I can find an answer for this, we can get on with our lives and stop worrying about it."

A hundred engineers, neuroscientists and neurologists from St Vincent's Hospital, the



Rob Bechaz and wife Debbie.
Picture: JOSIE HAYDEN

Bionics Institute and University of Melbourne worked for more than four years to make their bold plan a reality.

They teamed with medical device company Cochlear to create the start-up company Epi-Minder to oversee the manufacturing of the device and the trial.

St Vincent's Hospital director of neurology, Prof Mark Cook, came up with the idea 16 years after working with Coch-

lear implant inventor, Prof Graeme Clark. "We're finally able to put back control in the hands of the patients," Prof Cook said.

"It's taken a long time, but patients can straight away see how they can use this in their day-to-day life, how it will improve their quality of life, and how it will make them safer."

Taking inspiration from the Cochlear implant, a string of electrodes implanted under

the scalp records the brain's electrical activity.

An external computer analyses the data for unique brain activity patterns that precede a seizure, and sends an alert to the patient's phone just like a fitbit.

More patients will be implanted with the device this month, with a further dozen expected to be using the system over the next few months.

brigid.oconnell@news.com.au