

Man given Musk's Neuralink brain chip in UK trial says it 'feels magical' and gives new hope

One of the first people in the UK to use Elon Musk's brain chip says it "feels magical" and believes it could transform the lives of those with severe paralysis.

"It is a massive change in your life where you can suddenly no longer move any of your limbs," said Sebastian Gomez-Pena, a volunteer in the first UK trial of the device developed by Mr Musk's company Neuralink.

Seb had just completed his first term at medical school when an accident left him paralysed from the neck down. He's one of seven people fitted with the chip in the UK trial, designed to assess the safety and reliability of the device. The Neuralink chip, which is linked to 1,024 electrodes implanted in his brain, was fitted in a five-hour operation and inserted about 4mm into the surface of Seb's brain, in the region that controls hand movements.

Data from the chip is sent wirelessly to a computer in which AI software "learns" to interpret his brain's electrical signals. So when Seb "thinks" about moving his hand or tapping his finger, it appears on his screen as cursor movement or the "click" of a mouse, effectively restoring the hand control his accident destroyed.

"Everyone in my position tries to move some bit of their body to see if there is any form of recovery, but now when I think about moving my hand it's cool to see that... something actually happens," he said. "You just think it and it does it."

We meet Seb on the day his doctors are seeing him for the first time since he's learned to use the device.

They're brain surgeons, but seem as impressed as I am.

"It's mindblowing - you can see the level of control that he has," said Mr Harith Akram, a neurosurgeon and lead investigator of the UK trial.

It is still early days. It's taken Neuralink nearly a decade to develop the chip and electrode technology. The first device was implanted in a US volunteer two years ago; now 21 people in the US, Canada, UK and the UAE have one. All have severe paralysis - either due to spinal injury, stroke, or neurodegenerative conditions such as ALS. Results from the **trials** have yet to be published in peer-reviewed scientific journals or submitted to regulators. Neuralink agreed to give us access to the trial but declined to be interviewed.

However, in Mr Akram's opinion, the early results are promising.

"This technology is going to be a game-changer for patients with severe neurological disability," he said.

"Those patients have very little really to improve their independence. Especially now that we live in a world where we are so dependent on technology."

Neuralink says its mission is to "restore autonomy to those with unmet medical needs and unlock new dimensions of human potential".

Alongside this trial targeting areas of the brain controlling movement, another is targeting brain regions involved in speech in the hope it can be restored in people who've lost the ability to talk following stroke or other brain injury. The company also has plans to investigate reversing blindness by sending data from a cameras, via the chip, into the brain's vision-processing centres. Accessing other brain areas involves implanting electrodes deeper into the brain safely and reliably, a challenge the company admits it has yet to overcome.