

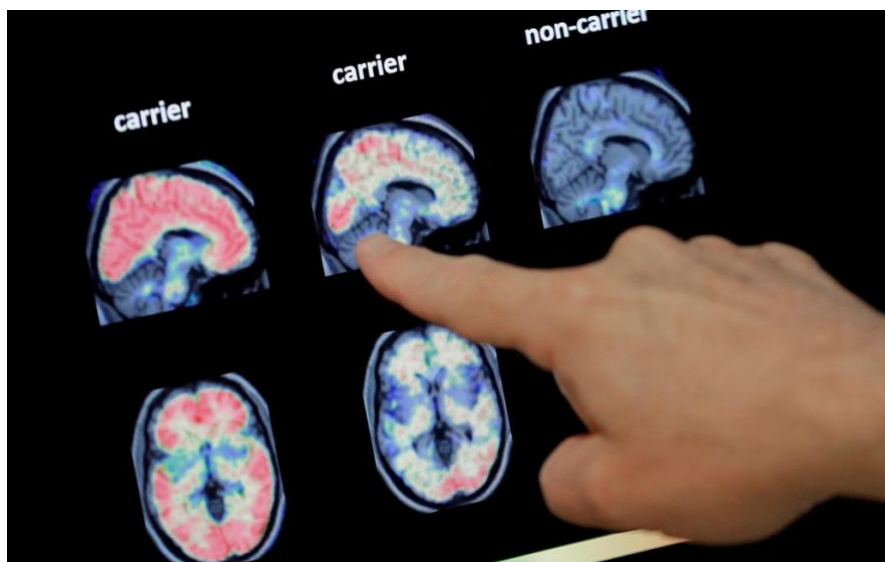
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Technology can help us fight dementia

The wealth of data that we generate could be vital in spotting signs of diseases such as Alzheimer's



David Cameron



We live in an age of data. Our mobile phones track how many steps we take. Our smart speakers listen to what we say. Our sports watches tell us not only how long we've slept but the quality of that sleep. Add all of that to the information that hospitals and GPs collect from us and we have, more than ever, a real-time picture of our own health.

But what if such information could give us an insight into our future health? What if subtle changes could indicate the early signs of diseases such as Alzheimer's? And what if those individual cases could create a wider picture of the causes of dementia?

These questions were at the centre of the discussion I had two years ago when, as president of Alzheimer's Research UK, I convened a meeting between international academics, pharmaceutical businesses and technology companies to explore whether we could use big

data, AI and technology to help detect the diseases that cause dementia much earlier than we do now.

Early diagnosis is crucial. We know such diseases can begin 20 years before symptoms begin, yet by the time they're diagnosed, a great deal of damage has been done.

We are catching cancer earlier. We've made huge steps in halting heart disease.

Indeed, heart disease offers us an example when it comes to dementia. We need to develop what I think of as a "statin for the brain", a treatment to delay or even stop the onset. This isn't a pipe dream. The world is awaiting news of whether a novel Alzheimer's drug – aducanumab – will go all the way to approval in the United States. This drug, like so many others, is more effective when taken early in the disease process.

So, today we are announcing a partnership between Alzheimer's Research UK and leading organisations in data science, clinical and neurodegenerative research, called the Early Detection of Neuro-degenerative diseases initiative (EDoN).

I've been involved in this cause for many years and I believe this represents the most promising partnership we've ever seen for detecting the diseases that drive dementia. It will see expert teams mining a huge range of historic and new data – brain scans, memory tests, genomic data and blood tests, as well as sleep patterns, speech patterns and gait – all of which will help build up that vital picture.

The initial funding to kick-start the initiative is being committed by Alzheimer's Research UK, the Iceland Foods Charitable Foundation and Bill Gates. Anyone who knows the impact that Bill and Melinda Gates have had on alleviating poverty will know what a draw their involvement will be to other funders whose support we need to bring in a total of £67 million over the first six years.

And it has an achievable aim: to develop a gadget – a combination of a wearable device and smartphone app – to detect the earliest digital fingerprints of a disease. This isn't some Big Brother intervention. Just as we measure our cholesterol levels to tell us when we need a statin, we need to identify these fingerprints of diseases such as Alzheimer's to see when we need a statin for the brain.

My interest in dementia was sparked when I was an MP, witnessing the tragedy of more and more people in my constituency slipping into this world of darkness. As prime minister, I was determined to prove this wasn't an inevitable part of ageing but was being caused by diseases of the brain that can be tackled with research.

That's why I put the issue on the global agenda, through summits such as the G8, and we doubled the research funding at home. And it's why I made it my focus post-politics. I believe that the "communications challenge" is being won. People accept that we can and must do something about this global emergency. That leaves us with the medical challenge. And in that, every single thing we learn is vital. Every piece of information will help shed the light of understanding on these diseases that affect so much of humanity. And, with enough support, EDoN is going to play a huge part.

David Cameron is president of Alzheimer's Research UK. The Early Detection of Neurodegenerative diseases (EDoN) initiative can be found online at: edon-initiative.org. Follow him on Twitter [@David_Cameron](https://twitter.com/David_Cameron); read more at telegraph.co.uk/opinion