Japan study looks to big data for signs of Alzheimer's

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Researchers in Japan will trawl through huge amounts of data to search for possible precursors to Alzheimer's Disease in a bid to identify who might develop a condition affecting millions around the world.

The study, which involves the healthcare arm of General Electric, will be based on a [health survey](#) that Hirosaki University in the northern prefecture of Aomori has been conducting for years.

The survey is in its 10th year and includes a total of 9,000 residents in the prefecture, covering subjects as diverse as bacteria in bowels to dental health, density of bone and athletic ability, an official at Hirosaki University said.

More than 300 areas are covered, including blood pressure, pulse rate and other bodily data as well as information on lifestyle and family history of disease.

Researchers also hope to collect genetic information, pending individual approval, said officials from the university and GE Healthcare Japan.

Blood samples from the people surveyed previously have been kept frozen but their [genetic information](#) has not been collected.

Researchers are also mulling ways to track down people who stopped coming to annual health checks because, if they have developed dementia, it could give clues to which factors they should keep an eye

on.

The data would be used for analysis in cooperation with GE in the hope of finding precursors to Alzheimer's Disease, the officials said.

The study, which could be extended over nine years, is being funded by the government in Japan, which is grappling with the challenges posed by a rapidly ageing population that is living longer.

Researchers are hoping to develop "an epoch-making method to find predictors of brain disorder" by analysing massive amounts of data with new software, according to a project summary posted on the science and technology ministry's website.

Alzheimer's Disease is the most common form of dementia, which is a growing social problem for Japan.

Worldwide, 35.6 million people suffer from the problem and there are 7.7 million new cases every year, according to a 2012 report from the World Health Organisation.

In 2010 the total global societal cost of dementia was estimated to be $604 billion, according to Alzheimer's Disease International, a federation of Alzheimer associations around the world.

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