

New technology improves vision for brain injury patients

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Credit: University of Aberdeen

The computer-delivered therapy is designed to improve speed and effectiveness of eye movements to better compensate for visual field

loss.

The program called NeuroEyeCoach can be considered to be the first evidence based registered [medical device](#) accessible to patients at home or in [clinical settings](#).

Published in academic journal Biomed Research International, is a report of a collaborative study between researchers in Aberdeen, LMU University of Munich and University of Verona showing that NeuroEyeCoach is an effective compensatory approach for those with [visual field](#) loss after stroke.

Loss of sight due to brain injury, usually from stroke, affects approximately a third of [stroke survivors](#). In these types of [brain injury](#), partial blindness in the visual field occurs due to a disruption in the connections between the eyes and the visual processing areas of the brain.

Professor Arash Sahraie Head of the School of Psychology at the University of Aberdeen who led the study said: "This type of sight deficit can be massively debilitating for those affected by it. Patients report a loss of confidence in their own ability to navigate the environment that can then manifest itself in the form of withdrawal from daily life.

"This is why it's important to develop techniques to help patients to improve as much as they can and this compensatory technique is yet another step forward in providing help and therapy for these patients.

"We have developed the research into an accessible treatment that can help patients achieve major improvements in their vision within about 2-3 weeks. The therapy is adaptive and we can tailor the treatment programme according to the needs of the individual.

"Our study found that this treatment can improve what remains of the partially sighted patients' vision by training them to better detect objects in their visual field."

Provided by University of Aberdeen

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