

Virtual reality training may be as effective as regular therapy after stroke

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A blood clot forming in the carotid artery. Credit: American Heart Association

Using virtual reality therapy to improve arm and hand movement after a stroke is equally as effective as regular therapy, according to a study published in the November 15, 2017, online issue of *Neurology*, the

medical journal of the American Academy of Neurology.

"Virtual reality [training](#) may be a motivating alternative for people to use as a supplement to their standard therapy after a stroke," said study author Iris Brunner, PhD, of Aarhus University, Hammel Neurocenter in Denmark. "Future studies could also look at whether people could use [virtual reality](#) therapy remotely from their homes, which could lessen the burden and cost of traveling to a medical center for standard therapy."

The study involved 120 people with an average age of 62 who had suffered a stroke on average about a month before the study started. All of the participants had mild to severe muscle weakness or impairment in their wrists, hands or upper arms. The participants had four to five hour-long training sessions per week for four weeks. The participants' arm and hand functioning was tested at the beginning of the study, after the training ended and again three months after the start of the study.

Half of the participants had standard physical and occupational [therapy](#). The other half had [virtual reality training](#) that was designed for rehabilitation and could be adapted to the person's abilities. The [participants](#) used a screen and gloves with sensors to play several games that incorporated arm, hand and finger movements.

"Both groups had substantial improvement in their functioning, but there was no difference between the two groups in the results," Brunner said. "These results suggest that either type of training could be used, depending on what the patient prefers."

Brunner noted that the virtual reality system was not an immersive experience. "We can only speculate whether using virtual reality goggles or other techniques to create a more [immersive experience](#) would increase the effect of the training," she said.

Provided by American Academy of Neurology

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