

Virtual reality may help adults recover from stroke

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Early results suggest that using virtual reality (VR) human-computer interfaces might help adult stroke patients regain arm function and improve their ability to perform standard tasks, when compared to patients who don't use VR. The findings are reported in a new review published in *The Cochrane Library*.

Virtual reality interfaces allow people to become immersed in a computer-generated environment. Most people are used to these in the form of video games, but they show potential as a therapeutic tool.

"Virtual reality and interactive video gaming may have some advantages over traditional therapy as they may give people an opportunity to practice everyday activities that cannot be practiced within the hospital environment," says the review's leader Kate Laver, who works in the Department of Rehabilitation and Aged Care at Flinders University, Adelaide, Australia.

Working with researchers in Australia and the USA, Laver searched the international literature for examples of where the use of VR had been compared with standard therapy. They found 19 trials that included a total of 565 adult [stroke patients](#). "Drawing conclusions from the data was difficult because the sample sizes were generally small and there was a wide range of type of VR used, as well as a wide range of features measured," says Laver.

Analyzing the outcomes, seven trials involving a total of 205 participants indicated that VR training could improve [arm function](#), compared with

[conventional therapy](#). In addition, three other trials involving 101 people indicated that VR can lead to a slightly better ability to manage every day activities such as showering and dressing.

"These positive effects were found soon after the end of the treatment and it is not clear whether the effects are long lasting," says Laver.

There was insufficient evidence to reach conclusions about the effect of VR or video gaming on grip strength or [walking speed](#). On the positive side, very few people using VR reported any [serious adverse events](#) such as pain, headaches or dizziness.

"Virtual reality looks as if it could be a promising [therapeutic tool](#), but we need a lot more data before we can assess which aspects of VR are the most important, and assess how long the effects last," says Laver.

Provided by Wiley

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